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ABSTRACT

Summaries of demonstration projects in registered nurse (RN) education in seven Southern schools are presented. The report on the Prairie View A & M University program focuses on issues addressed in establishing a program: avoiding previous program pitfalls, curricular adaptation, teaching strategies, and challenge (equivalency) policies. The George Mason University program report looks at faculty reactions and roles in program development. In the University of North Carolina at Greensboro program report, the construction of challenge examinations is featured, with the issue of professional socialization during the program also considered. A program to accommodate and optimize working and learning opportunities in a community hospital was the focus of the program at Northwestern State University of Louisiana, with clinical laboratories an important program element. At the Medical University of South Carolina, the program was developed around the working and learning experiences at the medical center hospital, and the curriculum and evaluation of the program are outlined. The University of Maryland at Baltimore project featured a rural outreach effort, in which local attitudes and relationships at the three sites were carefully nurtured. Urban outreach and a competency-based curriculum are outlined in the University of South Florida's program report. (MSE)

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PATHWAYS TO PRACTICE

Reports of Seven Demonstration Projects on RN Education

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Southern Regional Education Board
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FOREWORD

The Nursing Curriculum Project (NCP) of the Southern Regional Education Board (SREB) has published three papers on baccalaureate education for registered nurses (RNs) in its *Pathways to Practice* series. Under the overall title "RN Programs: The Rights of Passage," these papers focus on the fundamentals of RN education: the first paper is entitled "RN Education: The Basic Issues"; the second, "Types of RN Programs"; the third, "Planning and Operating an RN Program." With this publication, the NCP now concludes its report of project activity in this most important sector of nursing education. Herein are summaries of demonstration projects in RN education mounted by seven schools in the SREB region. The projects were coordinated by the NCP and funded by the W.K. Kellogg Foundation of Battle Creek, Michigan.

The information presented here was gathered by Patricia T. Haase, Director of the NCP, in numerous site visits and gleaned from the annual progress reports submitted by the directors of the individual projects. Dr. Haase was assisted in the research and writing of this material by Mary Howard Smith, Coordinator of the NCP; Barbara B. Reitt, Editorial Consultant, assisted with the preparation of the publication.

Audrey F. Spector
Nursing Programs Director

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RN EDUCATION: ESTABLISHING A PROGRAM

Prairie View A&M University, College of Nursing, Houston, Texas
Project Director: Elizabeth Cooper

In 1973, the faculty at Prairie View College of Nursing turned full attention to the development of a program for licensed nurses wanting to earn the baccalaureate degree. Prior to this time, the school had in place a generic* nursing program that was satisfying to both students and faculty, but knocking at the door were large numbers of registered nurses (RNs) seeking admission to a track** especially designed for them. Years ago RNs were permitted to challenge the beginning nursing course, but this practice had been discontinued and in 1977, on recommendation from the college's Curriculum Committee, a faculty member was given released time to follow ideas produced and questions raised in some five years of faculty planning to educate RNs.

Developing an RN program was a challenge to faculty, particularly as they wanted to avoid the pitfalls that plagued past program efforts. Several considerations were kept in mind: (1) the curriculum was to be designed to ensure that the RN program met the same objectives as the program developed for generic students; (2) teaching strategies were to be planned specifically for the adult, part-time, working student and used to enhance students' self-respect; (3) students were to be helped to select the right learning strategies carefully weighing their cognitive styles and professional goals; (4) faculty targeted for the program were to be chosen to ensure teacher-student compatibility.

The history of the Prairie View College of Nursing is instructive for defining the mission of the nursing program and for determining the direction of the RN endeavor. The college is the second oldest nursing education program in the state of Texas, and the largest predominantly black nursing school in the United States offering the baccalaureate degree. Since its opening in 1918, the college has graduated a larger number of minority professional nurses than the combined efforts of the other 20 baccalaureate nursing programs in Texas. To date, more than 700 nurses have graduated from the nursing program and many of these are serving in leadership positions in education, research, nursing practice, and community service.

*Generic students are pursuing an upper-division nursing major built on a base of liberal arts and sciences.

**A track is a series of sections for teaching RN students separately from generic students.

Emphasizing this history, the college wanted to take an active role in providing a nontraditional route for registered nurses, especially those of minority races, to meet the requirements of the state and nation for nurses with baccalaureate preparation. The need for greater numbers of minority practitioners in the health care field is recognized as a national problem. Thus, MacDonald suggests that one answer to maintenance of adequate nursing manpower in the South is the recruitment, graduation, and licensing of members of minority groups. Progress has been made in recent years, but the record is still far from good. Prairie View's effort to move members of minority groups through RN educational mobility programs and into enhanced practice opportunities was welcomed by the nursing community (MacDonald, 1973).

The parent institution, Prairie View A&M University, was founded as a normal school for teacher education in 1878, but the mission and scope of the university has changed over the years as the educational needs and demands of students varied. Prairie View evolved into a branch of Texas A&M University and offered instruction in all the disciplines taught at the university. Initially, Prairie View emphasized three distinct goals that were set forth in the authorization act: (1) to provide for the preparation and training of teachers; (2) to offer liberal arts and scientific curricula; and (3) to provide, as a Texas land-grant institution, opportunities for training in agriculture, home economics, engineering, and related branches of learning. Prairie View currently has an enrollment of about 5,000 in seven colleges: Agriculture, Arts and Sciences, Engineering, Home Economics, Industrial Education and Technology, Nursing, and Graduate Study.

Since 1968, the baccalaureate program of the College of Nursing has been located in permanent facilities in Houston, rather than on the main campus in the town of Prairie View, 52 miles northwest of the city. The move to an urban location has improved access to clinical experience for students by providing direct affiliations with hospitals in the Texas Medical Center, Harris County Hospital District, and city and county health departments. The more numerous clinical resources, and the pool of RNs in these clinical facilities wanting a baccalaureate degree, enhanced the faculty's desire to provide RNs with advanced educational opportunities.

CURRICULAR ADAPTATION

The curriculum the faculty eventually planned for the RN student was the same as for the generic student, but it was to be taught in a different way. The courses were identical, but faculty elected to construct modules* for the use of students in the RN track. Each nursing course was modularized, beginning with three in 1979, then four in 1980, and all fifteen in 1981. The nursing courses were adapted in this way by the generic program faculty and piloted to assure validity of purposes and applicability for use by the part-time working student.

The theoretical base for the instructional system was Bloom's concept that mastery of a subject can be achieved by most students if they are given appropriate instruction and sufficient time to learn. Aptitude was viewed as the time required for students to master the objectives. Instruction was adapted to individual learning needs and mastery of the objectives was the basis for grading achievement. Instruction for an unlearned sequence was revised and the student recycled into the revised system if insufficient mastery of the training material had occurred (Block, 1971).

The basic building blocks for the modules were the course objectives. These statements of purpose communicated a specific set of expectations to the student, provided direction, and encouraged learning. The objectives for a module stated what students would be able to do after instruction that they could not do before. The specification of instructional objectives gave focus to teaching and aim to the assessment of learning. The objectives also determined the test questions that were used to provide evidence of learning and verification of the effectiveness of instruction.

In this way, the content of each course was adapted to the needs of the RN students. Students were told why it was important for them to master the material presented. Clarifying for the students the reasons for their learning made it easier for them to attain mastery of the instructional objectives. Coursework was found to be relevant if students could relate it to personal interest, apply it to career objectives, use it as background for future study, or develop personal abilities considered important for social or professional mobility. Students were given exact details of policies and procedures for every course and module. Each student knew exactly what she/he was to do.

The nursing major thus developed required two academic years and a summer session to complete (see Figures 1 and 2).

*A module is defined as a limited self-instructional learning package.

Figure 1

General Education Requirements **54 Semester Hours**

Before admission the student is required to earn 45 credits distributed as follows:*

	Semester Hours
English	6
Psychology	3
Sociology	3
Social Psychology	3
Human Growth and Development	3
Human Anatomy and Physiology	6
Microbiology	3
Chemistry	6
Government	6
History	6

*Nine hours in the upper division

Figure 2

Nursing Major **67 Semester Hours**

JUNIOR YEAR

	Semester Hours
*Pathophysiology I and II	6
*Human Behavior and Development Crises	4
**Nursing I (Nursing Process)	6
*Nursing II (Individual Health Assessment)	4
*Nursing III (Community)	6
Fundamentals of Statistics	3
Research Process in Nursing	3

SUMMER SESSION

Nursing Electives	8
General Education Requirements	6

SENIOR YEAR

*Issues and Change in Professional Nursing	3
Nursing Elective	6
*Nursing IV (Community)	6
Special Topics in Nursing	6
Independent Study in Nursing	6
General Education Elective	3

*Challenge Examination is available.

**Clinical Challenge Examination is available.

Note: One hundred and forty hours are required to earn the baccalaureate degree in nursing plus 20 more credits in remedial reading and math.

TEACHING STRATEGIES

Faculty prepared the modules by: (1) formulating the specific objectives for each module, (2) developing the self-instructional packages themselves, (3) deciding on ways to test the students' abilities before working on the module, (4) devising after-module tests of student competency, and (5) formulating probable ways of revising the learning package if students were unsuccessful in achieving mastery of the objectives after the first attempt.

Instruction by limited self-instructional learning packages (modules) accomplished more than one purpose. First, the modules were adaptable to the adult learner who was a part-time student with firm family commitments. Second, the modules provided a measure of the quality of the RN program compared to the generic one. Faculty could be assured that each group of students, regardless of teaching strategies employed, were receiving the same high level of instruction.

In formulating the teaching-learning process, the faculty had four fundamental responsibilities: (1) planning of environmental situations which would most likely elicit the kinds of behavior sought, (2) motivating the students to engage in the behavioral responses desired, (3) guiding and directing the behavior of the students so that the responses sought were actually made, and (4) providing for positive regard and praise to encourage students' initiative and point out their strengths.

Learning experiences were selected to provide students with opportunities to expand their knowledge base or to practice skills necessary to develop critical clinical behaviors. The frequency and amount of practice called for in the module was consistent with behaviors and understandings required to meet the objectives. Work with the module provided learners with problem-solving skills that were practical and needed. Each successive module provided review of the previous one, including the continuous use of clinical skills in such a manner that each new clinical learning experience was built on the previous one.

The assessment of presenting abilities helped to determine whether a student had the required precursor knowledge and skill to benefit from modular instruction or whether the learner already possessed the behaviors and insights specified in the objectives. Careful analysis of the students' background knowledge, coupled with their preferred learning activities, determined which teaching tasks were most appropriate for a particular student.

The length of time the instructional package took each student to complete was based primarily on experience. Mature students returning to college after a long absence were initially given smaller units of learning materials, whereas recent associate degree and diploma graduates moved more rapidly through the self-instructional program.

Faculty continually sought ways to enhance students' self-respect and thereby to promote learning. Anxiety and anger were the usual initial student responses. Students spent first instructional sessions condemning novice baccalaureate nursing graduates; they couldn't start intravenous injections, they were unable to catheterize patients, and they were otherwise technically inefficient. The college's first applicant was a head nurse responsible for a neurological intensive care unit; her transcript showed 90 credit hours toward a degree in psychology. Because no RN baccalaureate program had been available to her, she began by asking, "Just what are the hurdles I will have to jump over?"

Student doubts about the adequacy of instruction, about the relevance of the content, and about the concern of the faculty began to wane as the program proceeded. In part, this change of attitude was due to the success students were having mastering the content presented in the self-instructional packages. Feelings of success and positive self-regard were clearly important to student growth. Eventually the students were able to discuss dispassionately the differences between the roles known to them and those for which they were preparing.

The influx of additional students placed a strain on available clinical experiences in primary care. Because the opportunities for teaching screening and assessment abilities were particularly sparse, faculty established a free clinic near the campus to ensure excellence in available clinical teaching experiences. Approximately 100 persons a day were seen in the clinic, which was staffed by volunteer doctors and nurses. RN students performed histories and physicals under their supervision.

In addition to providing fine teaching opportunities, the free clinic met the needs of the impoverished, medically underserved population in and around Houston's Fourth Ward. The area is densely populated and has a high concentration of individuals less than age 14 and over age 55. Clinic patients are predominantly black, Mexican-American, and Vietnamese. In fact, the growing number of Vietnamese patients presented unique nutritional, dental, and eye diseases. Medical problems included high incidences of cardiovascular diseases and cancer. The infant mortality rates far exceeded those reported for Houston generally. The younger population required preventive care; senior citizens, maintenance care; and all ages, screening and diagnoses.

CHALLENGE POLICIES

Prairie View's nursing curriculum is an upper division one that requires a foundation for 45 semester

hours of lower division coursework at an accredited college or university. Associate degree graduates are able to transfer credit to the university to meet this requirement, but graduates of diploma programs may come without academic credit to transfer. In this case, students may choose to complete the coursework in the liberal arts, natural and social sciences, or they may challenge the course content by passing the appropriate College Level Examination Program (CLEP) examinations. In addition, 30 hours of *nursing* coursework may be challenged. The RN student receives credit for her basic nursing knowledge by passing the following American College Testing's Proficiency Examination Program (ACT-PEP) examinations.

PEP Examination Name	College Credit
Maternal and Child Nursing	6
Commonalities in Nursing Care, Area I	4
Commonalities in Nursing Care, Area II	4
Differences in Nursing Care, Area I	4
Differences in Nursing Care, Area II	4
Differences in Nursing Care, Area III	4
Occupational Strategy, Nursing	4
	30 semester hours

Ninety percent of those taking these examinations have passed and been granted 30 hours credit.

Students must also pass a clinical proficiency examination developed by the faculty for RN students to facilitate the granting of advanced standing to each individual student. The Proficiency Examination Program (PEP) tests in nursing were originally designed by the New York External Degree Program directed by Lenburg.* Lenburg was also consultant to the Prairie View nursing faculty and assisted them in determining outcome criteria for their own clinical examinations (Lenburg, 1976). The clinical test thus developed is administered over a two and one-half day period. After student orientation, each applicant is checked for her/his performance of aseptic technique and other technical nursing tasks, such as the administration of medicines and the taking of vital signs.

Students are then assigned to care for hospitalized patients: three adults and two children. In preparing the clinical test, the faculty selected critical events and situations with which the student must deal satisfactorily. Whether the critical events and situations were met with an agreed-upon competency was determined by videotape, anecdotal records, and an evaluation of the student's care plan for the patient. A passing score was given if the student was evaluated as meeting the competencies selected for one child and two adult patients. Three evaluators were trained to assure inter-rater reliability among the faculty evaluators.

Students who wished to further challenge nursing courses were granted advanced standing on the condition of their passing the following ACT-PEP examinations.

PEP Examination Name	College Credit
Health Restoration I	10 hrs.
Health Restoration II	6 hrs.
Health Support, Area I	6 hrs.
Health Support, Area II	6 hrs.
Professional Strategies, Nursing	3 hrs.
Psychiatric/Mental Health Nursing	4 hrs.

CONCLUSION

The RN track is now a well-established part of the College of Nursing at Prairie View A&M University. Students are awaiting admission; nearly 400 RNs wrote the college in 1978 inquiring about matriculation. A first class of 22 nurses began in the first quarter 1979, an additional 12 in the second quarter, and 50 more in 1980. The college plans to enroll 100 students every year.

*These tests are now available through the American College Testing Services (ACT).

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RN EDUCATION: FACULTY REACT TO BASIC ISSUES

George Mason University, Department of Nursing, Fairfax, Virginia
Project Director: Beverly Boyd

Because the Department of Nursing at George Mason University (GMU) had put into effect the recommendations of the Nursing Curriculum Project as early as 1974 (see Figure 3), the faculty was especially aware of the need to give consideration to educational mobility for RN students seeking additional formal preparation. Between 1974 and 1977, 145 RNs graduated from the department of nursing, and applications for admission frequently stretched the department's ability to meet the demand. The members of the nursing faculty believed that they could share their experience teaching RN students with other faculty seeking to initiate or improve educational mobility opportunities in their own programs. It was decided, therefore, that the department would institute a series of workshops for faculty in the SREB region interested in the educational mobility programs.

Figure 3

Final Recommendations of the NCP

1. The practice of nursing at all levels is based on a body of knowledge that has at its center a set of competencies that are universally recognized as necessary to the provision of secondary care. This base of nursing, this set of competencies, should be further defined and developed.

2. The knowledge that is fundamental to each more advanced level of nursing practice is based on sets of competencies, each of which is characteristic of its own level and builds on the base of secondary care. The body of knowledge expands at each more advanced level of nursing practice and includes the different sets of common competencies necessary to the provision of primary, secondary, and tertiary care. The body of knowledge, these sets of competencies, should be further defined and developed.

3. A system of nursing education should be designed and developed to prepare nursing graduates for different levels and types of nursing practice, a system that reflects the structure of nursing knowledge as described in recommendations 1 and 2.

4. The associate degree curriculum should be focused on the preparation of graduates to give secondary care.

5. The baccalaureate curriculum should be focused on the preparation of graduates to give not only secondary care at the beginning level but also primary care at the beginning level and—at the student's choice—either primary care at an advanced level, secondary care at an advanced level, or tertiary care at a beginning level.

6. The graduate curriculum should be focused on the preparation of leaders to strengthen nursing's contribution to health care; therefore, graduate nursing education should be the first priority of nursing education for at least the next decade. To this end, graduate programs should be prepared to strengthen quality, expand curricular offerings, and increase enrollments.

7. Programs of higher education should incorporate continuing education as part of their regular structure, according it equitable priority in allocation of time, attention, and resources, and assigning to it faculty with academic credentials equal to faculty of other programs.

8. Programs of nursing education at all levels must incorporate flexibility in offerings, requirements, and time-and-place options for study.

9. Programs of nursing education should seek and sustain institutional cooperation in order to strengthen educational services and resources.

10. Curricular structure in nursing should be interdisciplinary. Cooperation and collaboration with other health care disciplines should be sought actively by nurse educators. Where appropriate, joint courses at several levels should be developed and nursing faculty should be given joint appointments in other departments.

BACKGROUND

The department's interest in educational mobility for RNs has a long history. Planning the nursing program at George Mason began in the late 1960s. Some discussions centered on the possibility of an "RN only" program to provide baccalaureate education for associate degree graduates of northern Virginia community college programs. But the idea was initially rejected by the university administration in favor of a basic generic four-year baccalaureate curriculum. In the early months of planning, information was sought through visits to nearly all of the hospitals in northern Virginia, a number of nursing homes, and six county health departments. This survey indicated that there was a sizable demand for baccalaureate-prepared nurses. To meet the need, the director was urged to begin with a student body of RNs and add generic students at a later date.

The nucleus of the faculty that was assembled in the fall of 1973 decided to begin their course offerings for a large component of RN students. Program approval was granted by the State Council of Higher Education in Virginia in March 1974, and the first course was taught that summer.

Nursing is a department within the university's College of Professional Studies. The Department of Nursing now has an enrollment of about 900, nearly half of whom are RNs. Appropriately, the university's location and history give it an institutional sensitivity to the learning needs of working adults. What is now George Mason University began as an extension center of the University of Virginia in 1948; it was designated as a two-year college of the University of Virginia in 1957; then in 1966, it was elevated to four-year status. In 1972, the General Assembly enacted legislation separating it from its parent university and provided that the new institution be named George Mason University.

Now a rapidly expanding undergraduate and graduate degree-granting university, GMU serves commuting students from northern Virginia, and is easily accessible from Washington and suburban Maryland. As part of Virginia's network of state universities, George Mason offers a wide range of courses during the academic year and summer months for day and evening students. Located in Fairfax County, just 16 miles from downtown Washington, the university serves a student population of more than 6,000 during the regular school year and 2,400 during the summer session. Part-time students (undergraduate and graduate) attending evening sessions make up more than 30 percent of the enrollment.

BACCALAUREATE PROGRAM

The curriculum of the George Mason baccalaureate program for RNs is the same as it is for generic students. Students are admitted to the university, enroll in non-nursing courses to meet the requirements in general education and the sciences, and, as they progress, they begin their nursing studies.

At the time of the project, the following program of studies was in effect: RNs who had completed approximately 55 hours in non-nursing courses (see Figure 4 for an overview of the general education program) were eligible to enroll in nursing courses. The nursing major is outlined in Figure 5.

Two foundational courses are required, but students may earn up to 25 of the 56 credits in the nursing major through credit by examination. The mechanism chosen to grant advanced standing to RN students was a series of challenge examinations. The College Level Examination Program (CLEP) in microbiology and an exam given by the Biology Department in anatomy and physiology are examples of advanced placement tests available to students wanting credit for courses in the biological sciences (see Figure 6 for the challenge policies).

Advanced standing in nursing includes testing provisions for one-half of the sophomore and the entire junior year of nursing courses. (An orientation to the school's philosophy is required of all students.) Teacher-made tests are used to measure the knowledge of the eight courses the applicant can challenge. There is no cost for these examinations and 91 percent of all the students who elect to take them complete all successfully. A few fail one exam, but most do not fail more than one. Students cannot retake the exams. Study materials are available to prepare for the examinations, study and support

Figure 4

General Education Courses		68 Credit Hours
Language Arts and Culture		15
English	6	
Speech	3	
Humanities	6	
Social and Behavioral Sciences		9
Sociology	3	
Psychology	6	
Mathematics and Natural Sciences		12-23
Chemistry	8	
Anatomy and Physiology	8	
Microbiology	4	
Mathematics (Statistics)	3	
Physical Education (recommended)		2
Electives		15-19

groups are soon established, and there is currently a market for class notes that may assist students with the examination questions.

The Department of Nursing consistently has had a rewarding experience with a high concentration of RN students and has enjoyed cooperative relationships with university administration.

Figure 5

Nursing Major Requirements	56 Credit Hours
SOPHOMORE YEAR	
Nursing: A Practice Discipline	3
Concepts of Health Through the Life Span	3
Design and Control of Nursing Systems	2
Technologies in Nursing	2
JUNIOR YEAR	
Elements of Pathology and Medical Therapeutics	4.4
Application of Principles of Nursing Systems	2
Nursing of Individuals	3.3
Nursing of Small Groups	3.3
SENIOR YEAR	
Scholarship Dimensions of Nursing	4
Group Phenomena	4
Nursing of Large Groups	4
Nursing in Systems of Health Care	3
Practicum: Nursing in Health Care	2
Nursing Systems for Individuals and Small Groups	4
Practicum: Nursing Systems	3
Special Problems in Nursing*	3.3
Directed Readings in Nursing*	2.2
Independent Study in Nursing*	1.3

*Not required

Note: One hundred and twenty-two credit hours are required for graduation.

Figure 6

Challenge Policies

Students may challenge these courses:

- Concepts of Health Through the Life Span (3 credit hours)
- Technologies in Nursing (2 credit hours)
- Elements of Pathology and Medical Therapeutics (4.4 credit hours)
- Nursing of Individuals (3.3 credit hours)
- Nursing of Small Groups (3.3 credit hours)

Note: Up to 25 credit hours may be challenged.

Visiting Faculty Review the RN Program

The W. K. Kellogg Foundation provided funds for the workshops that would allow for an interchange of faculty ideas and plans for educational mobility in nursing. Faculty from schools throughout the SREB region came to George Mason University to learn about the recruitment, admission, retention, and graduation of RN students. Some came because of community pressure to provide an excellent program for RN applicants which would improve community relationships. Others constantly evaluated the effectiveness of the sessions to see if what they had learned would "fly" back home. Still others felt a commitment to RN students and wanted to know how to work with them more effectively. The staff at George Mason University sensed an underlying desire on the part of the participants to keep baccalaureate enrollments high, by whatever means, but this desire was never voiced.

Specifically, visiting faculty wanted to know how to: (1) give credit for past learning, (2) develop clinical proficiency examinations, (3) "fit" RNs into integrated curricula, (4) develop a separate track for RNs, (5) design a curriculum for working students, (6) implement a program for the adult learner, (7) "socialize" students to a different role, (8) counsel and advise RN students wisely, (9) design institutional support structure for RN students, (10) effectively use independent study strategies without reducing the quality of the educational effort, (11) overcome faculty resistance to RN students, (12) prevent faculty overload when assigned to large numbers of students, (13) use faculty resources for RNs efficiently and economically, (14) retain national accreditation, (15) improve community relations, and (16) prevent the legislature from mandating "RN only" programs.*

Five workshops were conducted and attended by 37 persons representing 35 schools and departments of nursing. Workshop participants from both public and private educational institutions came from 13 states and the District of Columbia. The 35 nursing programs represented were at varying stages in developing baccalaureate programs for RNs. Three institutions had no RNs enrolled in their curriculum, but wished to establish a track for RNs to obtain a degree in nursing; others had as many as 100 RNs at various matriculation points, but wanted to discuss specific areas of concern.

*All of these concerns have been addressed in the first three issues of the *Pathways to Practice* series published by the Southern Regional Education Board and addressed specifically to issues in RN education.

The small size of the participating group was critical to its success. Workshops repeatedly demonstrated the value of intense problem solving with the aid of peers and project consultants concerning curriculum accommodations required to admit larger numbers of RN students. The instructional format provided for a mix of didactic presentations and group discussion, which allowed participants to share their ideas on many issues. In addition, approximately 12-14 workshop hours were devoted to consultative activity, whereby each participant received direct assistance with concerns about RN enrollment at his or her own institution.

All materials (forms, documents, policies) descriptive of the George Mason University program were provided for participants as they requested them, and representatives of the faculty and student body, as well as supportive staff and clinical agency personnel, were involved as appropriate.

The workshop schedule was adjusted according to the expressed desires of those attending. Frequently individuals wanted to investigate some aspect of the program in more detail or wished to review some materials that were not needed by others in the group. In many instances, participants took materials home for use with their colleagues and returned them by mail in a few weeks.

Visiting faculty shared considerable information about teaching methods, innovative ways of obtaining clinical practice experiences for students, and design of the RN curriculum. One example of innovative planning was the description of relationships established by a particular school with several churches, whereby instructors were informed of families who might desire and benefit from regular home nursing visits. The students and families then arranged to their mutual benefit for nurses to visit these families.

The beneficial aspects of teaching RN and generic students in the same class were compared and contrasted to tracking — teaching of RN students in different sections of the same course. (Both plans have merit and are discussed at greater length in the Number 2 issue of the *Pathways to Practice* series of NCP reports.) Teaching RN students and generic students in the same class sections was thought to encourage teacher flexibility and tolerance for student differences. Further, joint class instruction requires faculty to assume a more realistic role as teachers and to encourage reciprocal learning among RN and generic students.

Testing the clinical proficiency that RNs bring to the baccalaureate programs consumed much of the discussion time. Effective, efficient, and economical methods of doing such testing with large numbers of students were considered. Participants were given an opportunity to meet with representatives of GMU departments where departmental tests are given for validation of previous education. The CLEP examination process and the nursing proficiency testing procedure were reviewed in detail. Participants met with the nursing faculty directly associated with the credit-by-examination procedure in the GMU program. Preparation and distribution of materials, testing procedures, evaluative criteria, and record-keeping were explained. The peer support system among RNs relative to this examining process and its origin among the RNs themselves were described.

Curriculum design of "bridge" courses for RNs enrolled in a BSN program were readily shared by those participants who had designed such mechanisms; they were eagerly received by those whose program plans were in a much earlier stage of development. "Bridge" courses address the issues taught in the baccalaureate program in the junior year to which RN students have not yet been exposed, and usually include such concepts as physical assessment abilities, nursing process information, quality assurance and peer evaluation concerns, crisis and change theory, human development, patient teaching and counseling, research, and pathophysiology, to name a few.

Each of the five workshop groups thought it was critically important to designate a few specific individuals on the faculty to advise and counsel RN students. This practice assists in the role transition experienced by the individual already carrying a full load of adult responsibilities and re-assuming a student identity.

Participants talked with personnel of the university's continuing education division responsible for coordinating the off-campus non-nursing courses in which many RN students are enrolled. They also met with representatives of the various health care agencies employing RNs to gain a perspective of their concerns when large numbers of their nurses are enrolled in a baccalaureate program. Present in this last group were nursing service administrators from geographically remote areas. They stressed their desire for the availability of a degree-granting program for nurses in their employ. In fact, outreach programming, its philosophy, and mechanics were also a chief concern to visiting faculty, as their respective institutions are charged with serving resident populations a considerable distance from their main campus.

Participants Review the Problems of RN Education

Visiting faculty in each of the five workshops actively contributed to the discussion of issues related to RN education. Everyone in attendance expressed strong support for the concept of upward mobility through education for RNs. The problems with RN enrollments that are summarized below were common to all the institutions represented.

Challenge Examinations

—developing examinations to test accurately the RN's mastery of cognitive and clinical skills

—administering economically efficient testing procedures for large numbers of applicants

Curriculum

—designing an effective program for part-time working students

Students

—designing support structures for the RN student

—providing a consistent and effective counseling program

Faculty

—maintaining instructional quality

—overcoming faculty resistance to developing exceptional procedures for RNs

These recurring problems were discussed at length in each workshop, and visiting faculty seemed to gain considerable help from co-participants and project faculty.

OUTCOMES

Evaluations were elicited from all participants about six months after the workshops had been held. Two-thirds of the visiting faculty returned the forms mailed to them. Telephone contacts were then completed with about half the group to provide an opportunity for the individuals to elaborate on the workshop they attended, and to discuss further the supports and barriers encountered in their institution in implementing a program for RNs.

The response of the visiting faculty as they reflected on the knowledge gained was quite positive. The climate of openness and sharing within each workshop seemed to carry through to the evaluative procedures, and participants provided thoughtful and constructive critiques of their experience.

The small-group, problem-solving activity with peers and project consultants seemed to be a key factor in their success. Participants apparently gained a more positive and hopeful attitude toward the whole notion of modifying a program to accommodate RN students. One participant's comment seemed to summarize the prevailing mood when she concluded, "I see now *it is possible* to do!"

Some respondents reported no increase at the time of the survey in numbers of RNs enrolled at their institutions; others reported enrollment of almost twice the original number. Several participants chose not to respond to the question requesting comparative enrollment figures, indicating that it was too early in the development of their RN program plans to make numbers significant. A longitudinal study will be required to discover the exact changes in RN student enrollment figures that can be related to the workshops.

Cost-effectiveness was stressed. Visiting faculty felt it was impossible for represented institutions to obtain, at a like cost, consultation on so many options for RN program design as those provided at the workshops. During the workshops, participants were exposed not only to state-supported RN program models in place at George Mason University and the University of Maryland, but to the program at Marymount College, a private institution in the area. They reviewed in detail the programs described by their participant colleagues and were given intensive assistance in problem-solving by consultants with considerable experience in RN education. Further, nursing service administrators from the community met and consulted with each workshop group, and helped participants analyze RN competencies and needs from the applied point of view in the work situation.

The GMU faculty expects to continue to consult with other programs as requested. Increased program visibility has cast faculty in the role of experts on RN education, and they have already responded to a number of requests for assistance both from previous workshop participants and from others throughout the country.

The project at George Mason University presented the basic issues in RN education to persons in the region interested in starting new programs or improving existing ones. The concerns expressed by faculty visiting George Mason University were clearly those that the other six projects dealt with on a daily basis.

RN EDUCATION: CONSTRUCTION OF CHALLENGE EXAMINATIONS

University of North Carolina at Greensboro, School of Nursing
Project Director: Anne Landon

A commitment to educational mobility and an interest in the development of challenge examinations to grant advanced standing to RNs in baccalaureate nursing programs occasioned the nursing faculty at the University of North Carolina at Greensboro (UNC-G) to consider a major revision in their offerings for RN students.

RNs who had been educated in diploma and associate degree programs had always been admitted to the School of Nursing, but not in the numbers required for optimal manpower planning in the region. Thus, a special effort was required to permit faculty to increase the number of RNs enrolled and to facilitate their passage through the baccalaureate program with as little difficulty as possible. The director of the baccalaureate program said, "We wanted to plan different experiences for RN students."

Specifically, the nursing faculty wanted to develop improved mechanisms for planning upper-level theory and clinical learning experiences that would build upon the individual RN's previous education and nursing practice experience. They planned to identify specific criteria and protocols for challenge tests in secondary care nursing,* including written exercises and clinical performance examinations. The faculty pledged to undertake self-study and to attend development workshops so that they could better meet the educational needs and desires of RN students.

The opportunity for the RN to earn the baccalaureate degree in nursing has been available in North Carolina since 1950 when the first program was authorized, but not many nurses have taken advantage of the option. The state presently operates seven baccalaureate programs, all of which make provision for the RN. For the most part, the approaches of the learning experiences have been traditional, with some allowance for the RN to achieve advanced placement in some courses.

Consequently, the nursing faculty and the W.K. Kellogg Foundation hoped that a program incorporating individualized testing and provisions for special learning needs would attract a large RN population that could be better served. Since the university itself had been designated to serve the entire Piedmont region, the School of Nursing was itself in a strategic position to meet the educational needs of a sizable target population. While the university's service population is spread over 22 counties, Greensboro itself, a city of about 150,000, serves as the urban center for a cluster of smaller manufacturing towns (textiles and tobacco) and a large rural area. The city contains four other institutions of higher education and a variety of cultural, recreational, and educational activities and health services. The university has been a vital part of the city since 1891, when it was founded as the State Normal and Industrial College.

The institution's original purpose was to prepare young women as teachers, telegraphers, stenographers, typists, and in "such other industrial arts as may be suitable to their sex and conducive to their support and usefulness." It has experienced two name changes, but it remained a college for women until 1963, when it became coeducational and assumed its present name. Currently, with an enrollment of some 10,000, the University of North Carolina at Greensboro offers undergraduate and graduate programs in the College of Arts and Sciences and the Schools of Business and Economics, Education, Health, Physical Education and Recreation, Home Economics, Music, and Nursing.

CURRICULUM

The first two years of study are in general education, providing knowledge in the basic sciences and humanities (see Figure 7). Nursing courses begin in the third year and make up the majority of the work in the junior and senior years (see Figure 8). At the time of the project, this program of studies applied to the project's RN students.

Development of a Challenge Program

The faculty decided upon a course challenge system that would permit RN students to begin the baccalaureate nursing program at individual levels of knowledge and expertise. RN students would be exempt from the first nine hours of nursing credit required of generic students. The knowledge of this course material was either brought to the program by RN students or would be taught to them in a pro-

*Secondary illness care is associated with the community hospital and is often given in response to single episodes of illness that include continuing exacerbations associated with many chronic diseases. Secondary care addresses itself to illness episodes that are common and recurrent, or even routine. The personnel giving this care may be defined as generalists attending to illnesses that are usual, expected, and relatively predictable in terms of expected outcomes.

Figure 7

General Education Courses	72-74 Credit Hours
One course in English composition, or exemption	
Three courses in humanities	
One course each in physics and chemistry	
Four additional courses from natural sciences and mathematics, five additional courses from social and behavioral sciences	
Five courses from biology	
Additional electives	

posed course designed to bridge the gap between lower and upper division nursing programs.

Construction of the course began by dividing the theory on which the baccalaureate curriculum was built into concepts and processes that RNs had not yet been taught. Concepts included an understanding of loss, death, body image, sensory deprivation, pain, and immobility. Processes, by way of contrast, encompassed the use of conceptualization in nursing practice, client movement along the health-illness and stress-adaptation continua, patient assessment, conflict resolution, group dynamics, teaching-learning strategies, and crisis intervention. The course was constructed by interweaving these curricular concepts and processes into a vehicle for introducing them to RN students.

Figure 8

Nursing Major	51 Credit Hours
JUNIOR YEAR	
Concepts of Professional Nursing (RN students only)	4
*Practicum in Nursing I	4
*Practicum in Nursing II	6
*Nursing Care of Adults and Children I and II	10
SENIOR YEAR	
Dynamics of Professional Nursing III and IV	6
Practicum in Nursing III	6
Practicum in Nursing IV	6
Care of Patients and Families with Complex Nursing Problems	8
Professional Progress	1

*RN student may challenge these courses

Further, it was agreed that after the successful completion of the "bridge" course RN students could challenge 20 of the 51 required nursing credits (see Figure 9 for details). Consequently, the faculty developed and tested written and clinical evaluation tools to measure basic knowledge of secondary care nursing.

Test preparation was done carefully with the assistance of consultants, particularly during the summer sessions when faculty could devote more time to developing challenge examinations. During the first summer of the project, one faculty member attended a workshop conducted by Lenburg of the New York External Degree Program and returned to the university to share what she had learned with other faculty who were working with RN students. Another teacher gave a workshop on test construction for interested faculty and devoted particular attention to the use of the computer in item analysis. Project faculty also explored other areas of concern. They learned how to prepare learning modules, revise clinical evaluation tools, and devise innovative practicum experiences, including simulated learning experiences.

Teacher-made written challenge examinations were soon ready for administration. Challengers to the theory portion of basic medical-surgical nursing and

Figure 9
The Challenge Program

Year	*Must Take*	*May Challenge*
Sophomore		Introduction to Principles and Practice of Nursing *(not required)*
Junior	Concepts of Professional Nursing	Dynamics of Professional Nursing I and II *(not required)*
		Practicum in Nursing I and II *(medical-surgical nursing)*
		Nursing Care of Adults and Children I and II *(maternal and child nursing)*
Senior	Dynamics of Professional Nursing III and IV	
	Practicum in Nursing III and IV	
	Care of Patients and Families with Complex Nursing Problems	
	Professional Progress	

maternal-child health were asked to take tests covering each subject. Each test consisted of 180 questions and the examinee had to answer 70 percent correctly to pass. If candidates failed to achieve this score, they enrolled in the generic course. Before challenging the two courses, the students received a test packet prepared by the faculty that contained an outline of what the test covered, learning modules, handout materials, and a bibliography. Candidates were encouraged to meet with instructors to discuss any questions they might have about the material to be covered by the challenge examination.

The clinical challenge examinations were more difficult to develop and required more faculty time to identify the nursing practice abilities upon which they were based. First, the faculty identified required clinical competencies in physical hygiene and care, fluid and electrolyte balance, and patient mobility. Next, the faculty chose those competencies in secondary care nursing that would be required of students electing to test out of the existing courses in medical-surgical and maternal-child health nursing. Using these competencies, the test developers were able to devise several examinations to be given in the hospital.

Faculty were assisted in this task by a consultant who worked with them to define the adult learner and competency-based education and who helped them to identify critical elements in performance testing. As a result, a clinical test protocol was established for candidates wishing to challenge the clinical portions of established courses in the curriculum (see Figure 10 for clinical test protocol adopted).

SOCIALIZATION

The completion of the teacher-made written and clinical challenge examinations was a major step in accommodating a generic curriculum to an adult working student, but the faculty felt that the task was unfinished until they examined strategies particularly useful for teaching RN students.

Faculty were concerned about the socialization and role change students would be undergoing as they moved from a lower-division nursing program to a higher one. The nature of this role change remains unidentified, but it has generally been accepted to mean a process by which nurses selectively acquire the values, attitudes, interests, abilities, and knowledge prevalent among nurses holding baccalaureate degrees. The process of socialization is viewed by many educators as a radical transformation of a junior colleague into a professional practitioner.

Figure 10

Clinical Test Protocol

The student is encouraged to spend a day with one or two evaluators of performance before the clinical examination to reduce anxiety and acquaint the student with the evaluator's manner. The clinical examination in medical-surgical nursing begins in the evening, when the student receives the hospital and patient assignment.

Patients are carefully selected to present the kind of nursing needs on which the student is to be tested. All students are randomly assigned to at least two of the following nursing tasks: medications, irrigations, sterile dressings, oxygen administration, drainage, and application of heat and cold. Further, because safety and well-being of patients are fundamental to nursing practice, each student is evaluated on four overriding concerns—physical jeopardy, emotional jeopardy, asepsis, and communications. A miscue in any of these areas will cause the evaluator to intervene in the student's test practice. If the student can correct the error, she or he is allowed to proceed with the examination, but an automatic failure results if the mistake cannot be corrected.

On the day of the clinical test, the student meets with the evaluator for a pre-conference, when a written care plan for the approval of the evaluator is presented. The evaluator may question the student at this time about the patient's pathophysiology, diagnostic work-up, and therapeutic plan, to include medications and specific treatments. The student then cares for the patient according to the plan. If, during this time, the student jeopardizes the patient's physical or emotional well-being or violates aseptic technique, the examination is terminated and graded as a failure (unless the student is able to correct the error). More often, there is an evaluation conference that follows the clinical test. This is a time for the candidate to evaluate her/his own work and revise the written care plan accordingly. When the plan has been revised, the clinical performance examination is ended.

Evaluators who are in doubt about the quality of the care plan or the clinical performance may consult each other. They routinely make anecdotal notes which can be compared. In case of disagreement, a third person may act as referee. The final test score determination is made on the basis of evaluator observation and appraisal of the written care plan. During the observation portion of the test when the candidate is actually giving care, questions may not be asked by the evaluator unless an error has been committed.

Maternity nursing competencies are measured by the candidates' response to filmstrips put together to simulate situations in antepartal care, labor and delivery, and postpartal care. An audio cassette tape is used in conjunction with the filmstrips. The candidate is asked to assess the situation, identify the nurse's responsibilities, and develop a plan of care in each instance. During the showing of the filmstrips, it is permissible for the evaluator to ask questions.

Pediatric nursing competencies are tested in yet a different way. The candidate is given a case study before the test and is asked to assess the nursing needs, to identify problems to be addressed, and to plan for actual nursing care in line with goals she/he has established. Clinically, evaluators assess the candidate's ability to appraise children neurologically, use diversional activities, and feed infants in a caring and safe manner.

Faculty were particularly concerned with the RN students' ability to conceptualize nursing practice differently. Nurse educators have consistently anticipated that RNs entering baccalaureate nursing programs would be unable to view nursing practice as goal-directed and apart from task-oriented work or technical skills. The RN requires an entirely different process of role change than the generic student does. Generic students traditionally absorb, learn to value new behavior, and then incorporate that behavior into their own action repertoire. But for many RNs, prior values, norms, and standards must be rejected before new roles can be assumed, which is why the adjustment period of RNs to the baccalaureate program is marked by such "storm and stress."

Today's generic student is older than yesterday's and is more likely to be married and experienced in life's lateral roles; nonetheless, RN students have more responsibilities and commitments that impinge even more heavily upon their education than do generic students. In the nursing program, there were RN students in the middle of major changes in their lives: wives seeking divorces, and mothers who were the sole support for several children. Most were in debt to pay the cost of their education. Many worked 40 hours a week in addition to attending school. Some had given up important jobs to return to school, often experiencing the derision of their colleagues, both other nurses and physicians. Consequently, their self-confidence was not always at its highest point. One expressed the feeling that she had done something wrong with respect to her education, although she did not know what that something was. These life role commitments and vacillating feelings were taken into consideration by the faculty as they planned learning experiences that would lead directly to a change in values and abilities on the part of students.

The faculty valued each student's personal achievement and prior nursing background, helping her or him to build on the current theoretical base to a higher level of knowledge and practice. The RN students appreciated the receipt of a sound academic degree, and the generic students appreciated the commitment of the RNs to advancing their knowledge. Generic students gave the RNs a standing ovation at graduation.

Most authorities are agreed that faculty members' positive feelings are critical to the students' success, and the faculty working with RN students soon came to appreciate the special abilities required of RN students. They were particularly sensitive to students' difficulty in accepting conscious and unconscious influences of faculty as role models and encouraged the students to change their behavior to conform to a broader view of nursing practice. There was a particular reward for faculty as students became socialized to their new role and adopted those values and practices taught to them as their own. The joy of learning became a way of life for the students, and most enrolled immediately for the master's program in nursing.

CONCLUSIONS

Prior to the project, the School of Nursing had not graduated large numbers of RNs, but as a result of the publicity surrounding their new effort in RN education, the faculty received many letters of inquiry. There is no quota on the number of RNs accepted. The rule is to take as many as are ready to begin at the time the courses are offered. The project has resulted in a large increase in RN graduations and a renewed commitment by the faculty to the RN student.

Usually faculties have chosen to grant credit by an examination program that has either been designed by themselves or been chosen from nationally developed tests. (The most common national tests in use are those selected from the American College Testing's Proficiency Examinations or the achievement tests designed by the National League for Nursing.) The UNC-G faculty developed its own testing program. Just prior to the fall semester of 1979, students took the challenge examinations for the first time and a new era of RN education began at the University of North Carolina-Greensboro.

RN EDUCATION: WORKING AND LEARNING IN THE COMMUNITY HOSPITAL

Northwestern State University of Louisiana, College of Nursing, Shreveport
Project Director: Norann Planchock

The use of worktime for required clinical laboratory experiences in baccalaureate programs has always been viewed with disdain by nurse educators because it divides the students' loyalties between their employment responsibilities and their commitment to clinical learning. It is argued that the division destroys the effectiveness of the teaching program. On the other hand, many of the difficulties encountered by working students could be substantially alleviated if they could use employment time for clinical learning laboratories. The crucial factor is to maintain the quality of the instructional program.

RN students make many personal sacrifices to attend school and, as is characteristic of adult learners, sometimes they become overcommitted before realizing the difficulty of the program. Many work 40 hours a week at the same time they attend school. In addition, they have lateral role responsibilities that require equal attention: many are single parents, even the sole support of large families. RNs are reluctant to give up "good jobs" to return to school and often are unable to obtain leave.

The problem of designing a program for working students that is cost-effective for both the institution which offers it, and the student who chooses it for matriculation is never far from the minds of those involved. Sound financial planning for RN programs is a most important ingredient in their ultimate success or failure.

Deans of generic programs feel that RN students are more expensive to educate than their traditional students. RNs usually attend school part time while working, and seem to consume as much time and as many resources as the full-time students. They, too, require the same advisement and counseling, the same support systems, and the same teaching time as do generic students, who proceed in a more orderly fashion through the curriculum. For an RN program, faculty release time must be provided, for: (1) giving and grading competency-based testing (both written and clinical), (2) planning for different teaching techniques than the ones usually successful for generic students, and (3) developing instructional materials that can be used in nontraditional learning programs. In addition, there must be funding for the position of RN coordinator-facilitator — money that is often difficult to obtain.

Nevertheless, the Northwestern State University of Louisiana (NSUL) College of Nursing faculty wanted to meet the nursing needs of Shreveport and its commuting areas for baccalaureate graduates by constructing a program for associate degree and diploma graduates that would be responsive to the needs of the working nurse.

Plans dictated an RN track that would take experience and earlier preparation into account and make flexible scheduling available for those who wished to continue working while pursuing the degree. In fact, the clinical experience required in the RN track was to be the work experience, and students were to carry patient responsibility in addition to learning. They were to be paid as usual, and no additional nursing personnel were to be employed. Consequently, two evenings a week were to be designated as clinical laboratory time, with the instructor available to teach and consult with each student.

The nursing college maintains campuses in Shreveport, 73 miles from the main university campus in Natchitoches, for both upper-division programs (master's and baccalaureate degrees) and a lower-division one (associate degree). The nursing programs grew out of long-range planning by health care interests in the Shreveport area. In 1949, four Shreveport hospitals agreed to discontinue their diploma schools of nursing and to furnish clinical facilities and recruitment assistance for a Department of Nursing in the School of Applied Arts and Sciences of Northwestern State College. The department offered both a diploma program and a baccalaureate program until 1958, when the diploma program was terminated. Subsequently, the nursing department was elevated to "school" status and became a college of nursing in 1970 when the parent institution became a university.

The college operated a program designed for the RN who wished to complete the requirements for a baccalaureate degree but terminated it in 1968. Since that time, RNs have enrolled in the same program as the generic students, with opportunity to take challenge examinations for placement within the program. Unfortunately, the College of Nursing was unable to keep up with the demand for spaces in the baccalaureate program in this way; it graduated only about 10 RNs yearly. Both the college and the RN students felt that the process of attaining the degree took longer than necessary.

In 1978, the W. K. Kellogg Foundation agreed to fund initially the college's RN track to demonstrate

the flexibility of time and place options in planning teaching strategies for RN students.

CURRICULUM

The nontraditional program developed by the project aimed to provide the RN with the greatest flexibility possible in academic pursuits without loss of quality in education. It was designed to meet individual needs.

Baccalaureate students complete a minimum of 59 to 68 semester hours in general education prior to enrolling in upper-division nursing courses. In the upper division, they complete 46 hours of nursing content and 9 to 18 hours of general education courses. A total of 122 semester hours is required for graduation (see Figures 11 and 12 for details).

Figure 11

General Education		66 Semester Hours
Sciences & Mathematics		22
Biochemistry	7	
Microbiology	4	
Zoology	8	
Mathematics	3	
Language and Cultural Arts		18
English	9	
Speech	3	
Humanities	6	
Social Sciences		9
Psychology	6	
Sociology	3	
Precursors to Professional Studies, Health, Home Economics, Management, Orientation		8
Electives		8-9

Figure 12

Nursing Major	(46 Semester Hours)*
Professional Roles and Relationships III (2 semester hours)	
Professional Roles and Relationships IV (2 semester hours)	
Nursing Process III (9 semester hours)	
Nursing Process IV (9 semester hours)	
Historical Influences and Contemporary Issues in Nursing (2 semester hours)	
Principles of Medication Administration (2 semester hours)	
Professional Roles and Relationships I (2 semester hours)	
Professional Roles and Relationships II (9 semester hours)	
Nursing Process II (9 semester hours)	

*Nine additional hours of general education are required

Challenge Policies

A student is eligible to earn by examination one-half of the semester hours of credit required for an undergraduate degree. Credit by examination may be awarded on the basis of performance on subject examinations of the College Level Examination Program (CLEP), College-Level Advanced Placement Program of the College Entrance Examination Board (CEEB), and teacher-made tests constructed by the faculty of the College of Nursing.

After the RN student successfully completes the State Board Examination, 26 of the 46 required nursing credit hours can be challenged, including the sophomore-level nursing course and all junior-level courses. One semester before taking the examination, the student who wishes to challenge courses has access to a study guide containing a course overview, course outline, bibliography, relevant audiovisual materials, a topical outline, and an introduction to the course coordinator, who is available as a consultant. Students may then elect to take the teacher-made course exam. If they fail, they are required to enroll in the course; 90 percent of the students test out of these selected courses. A clinical challenge exam is being developed by the faculty. Meanwhile, the laboratory segment of the first semester junior year course is being used to assess clinical skills.

The following policies apply:

1. The candidate is allowed to enter the curriculum at a level appropriate for his/her demonstrated level of achievement up to the senior level. Senior-level nursing courses, which must be taken in residence, emphasize the nurse's role in primary and tertiary care.
2. Courses for which RNs and transfer students may establish credit by examination are restricted to junior-level courses.
3. Eligibility of licensed practical nurses and students from allied medical fields to take credit exams is determined on an individual basis.
4. The credit exams in the beginning nursing courses have a written component and a practical component. Students are required to achieve a passing score on the written component to be eligible to take the practical component.

The usual student in the RN program is like all adult learners. The project participants at NSUL were typically single, Caucasian females, 30 (29.8) years old, having a diploma or associate degree education, first licensed in Louisiana, having 5.5 years of work experience, and coming from an urban environment.

They were returning to school to increase their competence and sense of mastery, seeking professional advancement on their own terms. They wanted not only a greater confidence in their own identity and a better direction in the world of work, they also wanted to be better nurses. The participants all said that their main purpose for entering the program was to become better nurses.

Students also wanted an avenue of career mobility. Upon entry into the program, they all expected that the baccalaureate degree would be the highest degree that they would attempt to complete. But by the end of their first semester of work, many expressed intentions of eventually pursuing academic work beyond the baccalaureate degree. Of the five students in the first group, four are pursuing graduate studies.

Despite their strong self-concepts as nurses, they all tended to apologize for their basic educational backgrounds in the early stage of this program. They felt threatened by the challenge exam process, which they perceived as an obstacle in the attainment of their academic goals rather than a tool to ensure proper placement for academic success. After participating in the program for several months, students said that if they had been given a detailed orientation to the complete challenge exam process, their attitudes toward it might have been more positive.

Initially, the students wanted structure in their learning experiences. As Knowles has said, "Many students enter into a new learning situation feeling a deep need for the security of a clear structural plan—an outline, course syllabus, time schedule, and the like. They want teachers who know what they are doing, who are in charge" (1975 p. 37). And it was indeed difficult for many students to adjust, as they must, to a teacher who is a facilitator and to a structure that is oriented to process rather than content. Students entered the program with the assumption that they would be "given" or taught the content necessary to pass the various nursing courses. Instead, they were assigned to seminars, where the teacher functioned as the facilitator rather than a provider of knowledge, and where each student was required to prepare and present material. According to the students, this approach to learning made it hard for them to adjust to the program; they were seeking complete direction from the instructors and receiving very little. Many had anticipated difficulty in adjusting to a traditional student role after their years away from the classroom, but now they were confronted with a student role that was new and unexpected.

However, as the term progressed, this unstructured method tended not only to strengthen the independence of the individual learner, but to develop the unity of the students as a group. They developed the ability to delegate responsibility to subgroups and then organize the assignments into a whole.

Some of the seminars were designed to take advantage of student and faculty expertise in special subject areas. This was accomplished by having a specific student or instructor responsible for presenting to the group a topic in which she had a great deal of knowledge and experience. For example, a faculty member with expertise in psychiatric nursing led the seminars dealing with interpersonal relationships. On another occasion, an RN student conducted a seminar on the care of the critically ill neonate, for which she had prepared a well-documented slide presentation.

CLINICAL LABORATORIES: THE HEART OF THE PROJECT

For clinical activities each student developed a set of personal objectives that were combined with the instructor-prepared objectives. To help the students with the process, one of the first seminar topics dealt with how to develop objectives, and the instructor met with each student individually to give guidance and assistance. Care was taken to assure that each student's clinical objectives would help to promote her short- and long-term goals.

Inevitable conflicts occurred in meeting these objectives, since a work environment was being used for educational purposes. The students soon learned that the staff with whom they worked had to be educated in terms of what the students were trying to accomplish in the work setting. Most of them were able to cultivate productive learning environments. Some developed strong enough relationships with the staff to function also as readily sought-after resource persons.

Clinical settings for the nontraditional program were selected with great care. One important criterion was an expression of support for the program by nursing service administrators. The nursing director's explicit commitment was one means by which the faculty could ensure that the employment setting would be an environment in which the student could meet the clinical objectives of the nursing courses. The directors of nursing of five medical center facilities were contacted regarding participation. They were asked to agree to schedule the RN student to work on specified evenings of the week and provide support by permitting "available" time on each scheduled work evening to confer with clinical faculty. Three of the five nursing service directors agreed to these terms.

A schedule was then developed that allowed students to complete their didactic instruction within a three-day period each week. During these three days, the participating hospitals guaranteed that the students' work schedule would consist of two consecutive days on the 3 to 11 schedule and a third day when the student would be off duty. On the days that the student was scheduled for 3 to 11 clinical experience, the mornings were used for participation in seminars. On the third day, when the student was off, the mornings were used for class presentations and seminars, the afternoons were devoted to community health activities, and the evenings were available for the students to complete general education course requirements, if needed. The remaining four days of the week were left for negotiation between the students and the hospitals. This schedule helped meet the primary objective of the program—meeting the RN's educational goals without interrupting employment.

The RNs worked varying amounts of time: one was employed full-time, six were employed four days a week, and two were employed three days a week. It is interesting to note that those who had the heavier employment loads also carried the largest course loads for the semester.

Each RN was allowed considerable freedom in selecting the clinical area in which she desired to complete her clinical objectives. Only a few clinical areas — such as operating room, recovery room, and emergency room — were prohibited because of fluctuating client populations and limited opportunity for follow-up. To assist students in choosing their clinical areas, criteria were suggested to the students: (1) Does the area have high client population and turnover? (2) Are there good opportunities for client follow-up? (3) Will this clinical area help the student to achieve personal objectives? The clinical areas selected were a point for negotiation between the student and the nursing service director.

An important point stressed to the student was that the selection of a clinical area was not to be perceived as an attempt at clinical specialization, since the goal of the baccalaureate program in nursing is to produce generalists rather than specialists. At the same time it seemed counterproductive to dictate clinical areas, since each student had found the one she preferred and wished to pursue in the future.

The students first selected such units as neonatal intensive care, surgical care, pediatrics, coronary care, obstetrics, and medical-surgical nursing. Initially the student distribution was: one in the neonatal intensive care unit, two in obstetrics, and three on medical-surgical units. However, as they progressed through the program, some students wished to change their objectives and requested permission to alter their clinical areas. It was interesting to note that the two making such requests were in obstetrics. One explained that her initial choice had been based on a feeling of insecurity in clinical areas other than obstetrics; since the program had helped her obtain the knowledge necessary to function better in other clinical areas, she wished to alter her personal objectives to take advantage of it. She was transferred to a medical-surgical unit at her request. Another student simply stated that the unit's population was not varied enough for her to complete her clinical objectives. She also followed the appropriately identified channel through her nursing service department and requested transfer to a medical-surgical unit.

The clinical areas were used in other ways to complement the seminar sessions. For example, they could function:

(1) as a resource for the student's identification of a researchable nursing practice problem area.(One student successfully submitted her research proposal to the Council of University Research Administrators for funding.)

(2) as a laboratory for selecting a conceptual model and applying it to the nursing practice situation. (Models selected were Northwestern's nursing practice model, Orem's self-care model, Neuman's and Roy's model.)

COMMUNITY HEALTH

Clinical activities also served as a starting point for community health experiences. Students selected their community health clients from their clinical units. Several criteria were used to choose suitable clients: (1) the client and family must agree to home follow-up; (2) the student must be able to define and establish with the client what her/his role would be in the follow-up process; (3) the attending physicians must be agreeable to the follow-up; and (4) the client's needs must be suitable to assist the student in meeting established objectives.

A wide variety of experiences evolved from this process. Several of the students established strong working relationships with physicians that carried over into the care of many other patients. Providing follow-up care soon taught the students the significance of the family, and they learned how to assist the family to improvise when the home did not have exactly what was needed. At the clients' and families' request, several of the students accompanied them on return visits to the attending physician. There were instances in which students assessed clients and family needs that would require follow-up care once the client returned home, but the distance was too great for the students to conduct such care themselves. As a result of such situations, students learned to establish referrals to appropriate resources.

CONCLUSION

One of the most interesting findings of the project was that the RN students showed none of the hostilities usually reported from programs in which the RN returns to school to earn a bachelor's degree. Both students and instructors made an effort to explain this. The students believed that several factors had contributed to their positive attitudes.

—The instructors recognized and appreciated each student's worth as an experienced nurse.

—The students were allowed a high degree of freedom in meeting clinical objectives as the instructor served in the role of facilitator.

—The students received immediate feedback on their academic and clinical performance.

—A strong identity was established as a result of the seminars.

One can only point to all these factors, since there is no conclusive evidence to determine which one, if any, was responsible for the absence of the typical resentment of the RN student.

A weakness of the program that students identified during their second semester was their sense of isolation from the generic students in academic and social activities. Thus, at graduation they had little sense of identity with the larger generic class. As a result of their separateness, the RNs had little appreciation of the generic students' situation, i.e., strong academic background with little clinical experience. And the generic student was unaware of the RN's situation, i.e., strong clinical background without the usual background in professional roles and theory. To promote more interchange with the generic students, the schedule was changed for the second group of RNs. The clinical format remained the same, but the RNs were asked to consider taking the classroom content with generic students rather than in small group seminars. The RNs responded that they enjoyed their seminars but were willing to try this alternate approach. Actually, the change proved to be a more efficient use of faculty time, since the nursing courses were taught by a faculty team using individuals with expertise in specific areas. However, the students had mixed feelings and pointed out several problems with the new format.

—Too much class time was spent on the subject matter already familiar to the RNs, leaving less time for other subjects.

—The lecture format of the classes permitted little exchange of ideas with the generic students.

—The RNs said they felt a stronger sense of accountability for attendance and participation in the small group seminars than in the combined classes with the generic students.

—The lecture content seemed to be separated from the clinical and appeared more difficult to tie in, whereas in the small groups content and clinical experiences seemed to be more closely related.

—The RN students felt that they did not have enough small group contact with one another.

Evaluation procedures included questionnaires given to students and faculty; comparisons of test performance of RN and generic students; a survey of the RN graduates of the project, conducted from three to nine months after they received their degrees; and a comparison of the survey of the RNs who graduated from NSUL in the previous five years in the traditional baccalaureate program with those graduating from the nontraditional program.

Both students and faculty participating in the project were asked to identify its strengths and weaknesses. The use of the employment setting for meeting the educational objectives of the baccalaureate program was seen as the major strength. Specifically: (1) the RNs were able to apply the classroom theory of the nurse's professional roles and relationships in their own employment settings and prove that "it works"; (2) their employment helped them to meet financial obligations; and (3) they were retained in the health care system caring for patients.

The second principal strength was the flexible teaching approach, accenting individual planning for each student. The students identified subject areas they wanted to explore and develop further, both in the clinical setting and in the classroom. This assisted them to develop as independent learners and facilitated the maximum use of time in the course. Time was not wasted on redundant review of earlier learning but was used to concentrate in areas of need and interest.

The students clearly believed that they gained knowledge and developed professional skills above those achieved in their basic education preparation. Often RNs in traditional baccalaureate curricula feel that they receive only a piece of paper and that their basic educational preparation in AD or diploma programs was sufficient or superior.

The uniqueness of the program brought the nursing service and administrative departments of the three local hospitals into a more active role in the RNs' education. The NLSU program was greeted with enthusiasm by all of the hospitals, even to the extent that one of them added an RN position on the 3 to 11 shift so a student could participate in this program. Also, the program became another means by which nursing service and nursing education could work together in meeting educational needs of RNs and nursing needs of patients.

The College of Nursing plans to continue using full- or part-time employment to fulfill course requirements. Fifteen RNs registered in 1980-81 for courses to complete their degrees. Because of the decreased enrollment of new high school graduates in baccalaureate degree programs, it is likely that RNs pursuing baccalaureate education will increase their numbers in nursing schools. And there is also the possibility that adults who have pursued one facet of nursing practice for several years will return to school to prepare themselves to pursue another one.

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RN EDUCATION: WORKING AND LEARNING IN THE MEDICAL CENTER HOSPITAL

The Medical University of South Carolina, College of Nursing, Charleston
Project Director: Suzanne Doscher

At the Medical University of South Carolina, the College of Nursing recognized with increasing clarity that today's nursing responsibilities are rendering inadequate the preparation that was sufficient even a brief decade ago. The growing complexity of hospital care and of the nursing roles therein has led to the growing conviction that a baccalaureate degree is the optimal preparation needed for practice in a medical center devoted almost solely to tertiary care.

In South Carolina, as elsewhere, baccalaureate nursing programs have been urged to offer opportunities for RNs without the baccalaureate degree who are already in service. Responding to these pressures makes additional demands on the resources of the state's educational institutions. The College of Nursing of the Medical University of South Carolina (MUSC) has always tried to respond appropriately to the extent that its resources would allow. In 1970, when the college established an "RN track" for RNs wishing to enter as full-time students, there were some 30 applicants for the 10 available spaces. As this program continued over the next several years, the divergence between RN demand and available spaces grew still wider.

In 1977, Medical University Hospital employed 314 registered nurses, of whom 139, or nearly half, did not have the bachelor's degree. Of these nonbaccalaureate RNs, 12 were supervisors and 21 were head nurses. Nursing administration reported that a number of good nurses left every year to accept positions in locations where they could work toward degrees while continuing employment. This turnover of staff strained the quality of care within the institution. In some cases, nurses pursued non-nursing baccalaureate degrees. It was estimated that at least 35 percent of the nonbaccalaureate nurses on the Medical University Hospital staff wanted to obtain the bachelor's degree. This was an impressive number in view of the fact that, nationally, only 10 percent of nonbaccalaureate RNs were said to be seriously interested in advancing their education.

The College of Nursing believed strongly that, of all health care agencies, a university medical center should serve as a model for nursing care; that in such an institution, where complex tertiary care is called for, there should be a "significant mass" of well-prepared nurses to give such care and to serve as role-models for students. Faculty further believed that a substantial improvement in the quality of nursing care could be achieved in a relatively short time in a hospital by increasing the proportion of RNs having good baccalaureate preparation. This would mean giving the nurse access to a system of formal education that recognized and capitalized on her work experience, and that could be set up within her practice environment.

These convictions were entirely congruent with the recommendations of the NCP, which had maintained that nurses with diploma and associate degree preparation could provide quite satisfactory secondary care, but that the complexities of tertiary care required the stronger theoretical base of the baccalaureate program. It became evident, therefore, that the interests of the nursing faculty fitted well

with some of those to be pursued in the demonstration phase of the SREB Nursing Curriculum Project (NCP).

The major thrusts in the design of an education program for RNs employed at the Medical University Hospital reflected these faculty and curriculum project concerns. The program proposed to: (1) permit Medical University Hospital RNs to work toward the baccalaureate degree in an established, organized, fully developed, and accredited program while continuing to practice nursing; (2) permit program development to proceed without requiring a large number of additional faculty to be hired; (3) provide an educational program of recognized quality at a minimum cost both to the state and to the student; and (4) strengthen communication and cooperation between nursing service and nursing education in order to improve patient care.

The College of Nursing is located in Charleston on the medical center campus, which has grown rapidly since World War II. The University Hospital was added in 1955. Also, in the 1950s, laboratory and training facilities were enlarged and a cancer clinic and research laboratory were added. The 1960s brought an eight-story research building, intensive care units, psychiatric beds in the hospital, and a seven-story building for basic sciences and the College of Dental Medicine. In 1970, a library-administration building was added.

At present the university has six colleges: Medicine, Nursing, Graduate Studies, Pharmacy, Dental Medicine, and Allied Health Sciences. Medical University Hospital now has a 500-bed capacity. A number of other medical facilities have grown up close to the university complex, including the Charleston County Hospital, the Veteran's Administration Hospital, the Evaluation Clinic of the South Carolina Retarded Childrens Habilitation Center, Roper Hospital, and the Charleston County Health Department. Thus, the medical facilities in Charleston provide rich resources for the College of Nursing.

CURRICULUM

The program of studies leading to the Bachelor of Science in Nursing degree requires the student to have completed one or more years of college elsewhere (see Figure 13 for admission requirements). The program begins at the sophomore level and is designed thereafter to span three academic years, more specifically, six semesters plus one summer semester falling between the junior and senior years. Since the curriculum is based on the belief that the fundamental and core nursing practice content must accompany general education courses if comprehensive and integrated learning is to take place, students begin the nursing major in the sophomore year and move toward specialized and advanced nursing experience in the upper division (see Figures 14 and 15 for details). General education and cognate courses are distributed throughout the program.

The year-by-year progression of courses for the RN project students is shown in Figure 16.

Figure 13

Admission Requirements	**31 Credit Hours**
Chemistry (Introduction and Bio-Organic)	8
English Composition and Literature	6
General Psychology	6
General Biology	8
Sociology	3

Note Thirty-one hours of credit are necessary for admission to the College of Nursing and all requirements can be challenged by the College Level Examination Program.

Figure 14

General Education Courses		**66 Semester Hours**
Humanities		18
*English	6	
*History, Political Science, or Economics	3	
*Electives	6	
Philosophy	3	
Behavioral Sciences		15
*Sociology	3-6	
*Psychology	9	
Biological and Physical Sciences		33
General Biology	8	
Chemistry	8	
*Microbiology	4	
**Human Anatomy	4	
Human Physiology (only available through MUSC departmental exam)	4	
**Pharmacology	3	
Elective	3	

*Valid examinations are available in these areas through the College Level Examination Program (CLEP) at College of Charleston or MUSC departmental examinations.

**Validation examinations are available in these areas through NLN Achievement Tests.

Figure 15
RN Track: Nursing Major Requirements

	59 Semester Hours
All students are required to enroll in and satisfactorily complete these courses:	
Professional Nursing: Changing Concepts	2
Human Relationships II	1
Human Relationships III	1
Nursing Practicum (prerequisite to senior-level clinical courses)	5
Psychiatric-Mental Health Nursing	5
Community Health Nursing	5
Introduction to Nursing Research and Statistics	4
Leadership in Nursing Practices	5
Nursing Elective	3
	31
Students may either enroll in or challenge these courses:	
*Fundamentals of Nursing	5
**Nutrition	3
*Human Relationships I	1
*Comprehensive Care of Children	5
*Childbearing: Women and Families	5
*Adult Medical-Surgical Nursing	9
	28

*25 semester hours total credit for these courses (*) upon successful completion of all senior-level courses.
**3 semester hours credit for this course upon successful completion of a written exam.

PROJECT ACTIVITES

The faculty proposed to: (1) enlist the collaboration of the support systems of the University Hospital and the College of Nursing; (2) select and admit an initial class using assessment tools to differentiate individual goals, values, and characteristics; (3) diagnose each student's current knowledge, skills, and learning needs and, on this basis, prescribe learning tasks to be accomplished; (4) develop teaching and evaluation strategies to implement the program; and (5) evaluate the initial impact of the program on the quality of care in Medical University Hospital.

The faculty believed that RN students presented several characteristics that required a special kind of socialization to help them change roles in nursing practice. Socialization was conceived as a process by which students selectively acquire the values, attitudes, interests, skills, and knowledge inherent in the level of practice to which they aspire.

In point of fact, the faculty felt that RN students come to the baccalaureate program as concrete rather than conceptual thinkers. Past experience had shown them to present "pat" answers rather than a willingness to analyze data, to be "present" oriented, and to feel a kinship—a loyalty—to the health care system, so that the "system did the thinking" for them. Students were deficient in their ability to apply theories to the care of patients in the practice setting.

At the beginning of their studies, the learners appeared weak in the use of nursing process, breaking it down into separate steps and performing them automatically. In their nursing practice they focused on individual patients, failing to view the impact of family and community on the patient's illness.

Frequently the RN students came to the program with a low level of self-esteem. They viewed

Figure 16
Progression of Courses for RN Students

Year	*Must Take*	*May Challenge*
Sophomore	Professional Nursing: Changing Concepts Human Physiology	Nutrition Human Anatomy Fundamentals of Nursing Human Relationships I Pharmacology Microbiology
Junior	Human Relationships II Human Relationships III Nursing Practicum	Comprehensive Care of Children Childbearing: Women and Families Adult Medical-Surgical Nursing Pathophysiology
Senior	Psychiatric-Mental Health Nursing Community Health Nursing Leadership in Nursing Practice Current Issues in Nursing Introduction to Nursing Research and Statistics Nursing Elective	

themselves as their colleagues saw them, dependent upon the directions of others. Because students could admit to negative but not positive feelings, the faculty planned carefully for learning experiences that would foster the rejection of these old norms before introducing new values and abilities. This process is often painful, as much of a working nurse's self-esteem derives from her past nursing experiences. But the students were pleased with the faculty support they received.

DIAGNOSTIC TESTING

Each student's current knowledge, skills, and learning needs were diagnosed. The assessment began with a diagnostic interview designed to elicit career goals, reasons for choosing this program, and knowledge of major themes in the baccalaureate curriculum. A review was conducted of previous academic work in general education and of the student's nursing background. In addition, two questionnaires were administered: the Health Care Professional Attitude Inventory and the Preferred Learning Style Index.

The Health Care Professional Attitude Inventory was developed by Dr. Howard L. Stone of the University of Wisconsin at Madison and was used in this project with his permission. It consists of a series of statements about health care professionals and delivery systems, which the respondent rates on a scale of 1 to 7. The statements are grouped according to their relationship to six key attitudes: acceptance of consumer control, indifference to credentials, superordination of the well-being of people as a purpose, critical searching, impatience with the rate of change, and compassion. The inventory is based on the concept of "a new face of professionalism" developed by Matthew Dumont of the National Institute of Mental Health, who sees professional life as undergoing redefinition to meet the demands of changing environments.

The second instrument, the Preferred Learning Style Index, is also a product of the University of Wisconsin at Madison. The students are asked to respond to 13 statements representing activities associated with student learning. Responses are scored on a seven-point scale and learning styles are coded as "receptive" (learner prefers to encounter the entire content of what is to be learned in final form) or "discovery" (learner prefers to encounter content unstructured, to gather information, and to determine relationships).

Data obtained from the review of previous academic work in the humanities, basic sciences, and behavioral sciences were used in advising students about options available to meet requirements. During the first semester, project staff spent considerable time in academic counseling, individually prescribing each student's academic program. Although there was a wide range of differences, the average student transferred approximately 22 academic credits and enrolled in an average of 8 semester hours of humanities, basic, or behavioral sciences during the program.

Several students entered the program with deficits in the science prerequisites for the first clinical course. To facilitate students' curriculum progress through the program and to allow them to meet prerequisites, the school offered them a professional issues course and a research course in the first semester. The faculty believed that the exposure to this subject matter and to the more traditional teaching strategies used in both courses would help the student make the transition to the educational environment. This belief was supported by data from the Diagnostic Interview, which revealed that the majority of students had deficits in knowledge of the nursing and research process, and by data from the Preferred Learning Style Index, which showed that students' learning styles were mixed. In subsequent semesters, increased emphasis was placed on diagnosing current knowledge of specific nursing content of the courses to be taken.

TEACHING STRATEGIES

The underlying aim of the teaching strategies was to assist the student to meet the objectives of each course in the existing registered nurse track of the baccalaureate program. Flexibility and accommodation of individual needs were guiding principles. Because students had other commitments, time for didactic instruction was arranged for their convenience; many classes were scheduled in late afternoons, evenings, or on Saturdays.

The faculty consisted of the project staff and nine clinical specialists who were employed by the hospital and held joint appointments with the College of Nursing. Joint-appointment faculty and project staff met together periodically to discuss student progress and, when necessary, to revise teaching strategies. The students and the joint-appointment faculty quickly developed a mutual respect.

Role modeling is particularly important to the social learning of the RN student, and for that reason the clinical specialist was an especially apt teacher. Working students whose values and abilities were changing from those appropriate to one role to another one on a higher level were particularly impressed to see how the clinical specialist used her knowledge base in practice.

The work setting was used for clinical practice time, and all interested parties benefited from this arrangement. The clinical laboratory courses consisted of self-directed learning supervised by the clinical specialists. Fortunately, RN students' positive experiences on one unit traveled with them as they returned to their unit of employment. The value of

positive interpersonal relationships was stressed, and students quickly learned to collaborate and communicate with members of other health disciplines.

The project staff and other faculty devoted considerable time to converting courses to modular form. For example, a 286-page module book was developed for use in a beginning course, and the theoretical portion of another course was divided into six mini-sections.

The theoretical portion of community health nursing was so treated, and students self-paced their study in a progression of written examinations. Psychiatric nursing content was modularized, and weekly seminars were held for theoretical discussions. Students enjoyed this opportunity for individualized study, and faculty were encouraged to develop innovative clinical teaching strategies.

Students enrolled in psychiatric nursing were able to meet some of the clinical objectives in the practice settings of their choice. In addition, ten 30-minute videotapes were developed for students to view independently at their convenience. These tapes, showing patient pathology and nursing intervention, were then discussed in weekly small-group sessions. Students consistently evaluated the videotapes as very effective educational tools.

Students' past experiences and present learning interests in community health were the basis for planning clinical experience, a portion of which consisted of student-designed learning activity. Also, in an effort to foster permeation of community health concepts in the tertiary setting, each student engaged in discharge planning with a patient from her own practice setting and in home follow-up care.

Included in the coursework were projects on the teaching-learning process, leadership, and discharge planning and home visit follow-ups. These projects resulted in monographs for patient teaching that were printed and used in the hospital and in-service education presentations.

CONCLUSION

Several methods were employed to assess the impact of the program on the quality of nursing care in Medical University Hospital. One source of evaluation information was the bedside audit, in which specific nursing activities were assessed. Other evaluation tools were focused either on major themes of the baccalaureate curriculum or on the student's perception of attitudes and behaviors which the college believed would positively influence the quality of care.

Bedside Audit

From September 1978 through August 1979, data were collected via the Department of Nursing's bedside audit. A small number of nurses with baccalaureate degrees served as auditors and completed bedside audits regularly during these 12 months. The RNs whose behaviors were audited were project students and a control group of nurses employed in hospital units other than those employing project students. (Neither the composition nor the educational backgrounds of the control group remained constant in this study; hence, there were limitations.)

Five types of audits were used for data collection. Audits took the form of checklists containing numerous questions grouped by categories (e.g., environment, patient knowledge, emotional aspects). Possible responses to all questions were "Yes," "No," or "Not Applicable." Items within a category were treated as a subscale, and six subscales were scored separately. Audits were analyzed by group, i.e., project students, control, and combined groups, at three different times during the project period.

Results of the group analyses showed that scores for both project and control groups were high. The mean scores for the project group were higher than for the control group in all subscale comparisons but one (patient knowledge). However, across all audits the range of subscale averages was small (93.62 percent to 99.23 percent).

When audits were analyzed by time period, average percentage scores showed small increases across the three time periods for the project group: 94.89 percent for the first time period, 95.65 percent for the second, and 96.64 percent for the third. Somewhat larger gains were achieved by the control group: 92.85 percent, 94.47 percent, and 97.80 percent.

A noteworthy finding of this study is that scores for both project and control groups were quite high. Several interpretations of this finding are possible. It may be that all nurses were performing at an outstanding level. On the other hand, it may indicate that the audits did not discriminate good from poor nursing practices, either because the raters were lenient and gave inflated evaluations, or because the audits did not examine functions other than those routinely expected and provided in hospital care. Certainly, the results suggest the advisability of reappraising the validity of the bedside audit.

Percentage scores increased modestly across the three time periods for both the project and control groups. The initial high performance restricted the potential extent of gain. It should be noted that scores could have decreased across time. However, since the same raters were used throughout, it is possible that later ratings were favorably biased.

Hospital Nursing Administration Questionnaire

At the conclusion of the project period, the director and associate director of the Department of Nursing, Medical University Hospital, responded to a

two-item, open-ended questionnaire designed to obtain their comments on the value of the program for improving nursing care. The framework for the questionnaire evolved from selected curriculum threads. A snyopsis of their responses follows:

Leadership: Definite growth in leadership capabilities was observed in the total group of students. There was noticeable improvement in the quality of documentation of patient care; increased awareness of the need to communicate information in writing; improvement in conciseness, clear expression of thought, and an expanded vocabulary; willingness to enter into and/or initiate conflict resolution as a constructive leadership tool; increased assertive behavior; more decisive behavior; willingness to express a minority opinion; initiation of new, creative approaches to long-standing problems in the delivery of patient care; and openness to constructive criticism and the ability to use it productively.

Family orientation: Increased commitment to including families in the patient's care was exhibited by all students. Particularly, there was an increased awareness of how a nurse's own value system can predetermine conclusions regarding the patient and family, which may then prove invalid when the nurse visits these same patients and families in their homes.

Collaboration: Students collaborated more often with other health care personnel regarding patient care issues. Nurses exhibited more assertive behaviors, showed a growing confidence in their own competency, and expanded on their knowledge of resources available within the institution and the community. For example, the nurses increased their use of the psychiatric liaison nurse; the number of community health referrals generated grew; and the nurses suggested an increased involvement of the quality assurance coordinator in various aspects of patient care.

Nursing process: Growth in understanding and use of the nursing process was clearly exhibited on the direct patient care level, the unit level, and the division level. This ability was manifest in the nurses' greater ability to define problems concisely, develop alternative approaches to problem resolution, and identify sound rationale for the solution chosen. Although the project period was perhaps too short to evaluate fully the use of nursing process, the students' ability to identify alternative solutions and to logically support and evaluate the solutions implemented has already greatly improved patient care.

Professionalism: Growth in the students' willingness to accept responsibility and in their understanding of their accountability for patient care has been observed. The students appear more knowledgeable about occupational issues facing nursing and believe that the resolution of these issues is a matter of personal concern.

Student Exit Interview

During the last month of the project students were interviewed for the purpose of evaluating the effectiveness of the program as an educational experience. The students' responses to an 11-item, open-ended interview schedule were tape-recorded, typed, and then analyzed using content analysis. Below is a summary of the findings:

1. Students indicated an increased awareness of the influence of family and home environment on the individual client's health status.
2. They perceived themselves as more cognizant of the sociocultural, psychological, and self-actualization aspects in planning holistic nursing care for individuals and families.
3. Their responses emphasized the relevance of collaboration with all health care members within and between agencies.

Communication emerged as a major theme. Students reported more awareness of themselves, their feelings, attitudes, and values, and how these may affect interaction with individuals and groups. They expressed an awareness of the importance of therapeutic communication as a major factor in all aspects of their nursing practice.

Another positive change reported by the students was an enhancement of their self-concept, bolstered by their sense of accomplishment and greater career choice. Their interview responses suggested that they had strengthened their personal sense of identity as a valuable and contributing member of the nursing community.

Students' interview answers still reflected a concrete way of thinking. They were able to state the components of the various nursing processes and roles, but were often unable to visualize the interrelationships of these components in their own nursing practice. Thus, their responses suggested some difficulty in applying to their practice the theory they had learned.

In summary, student responses reflected increased knowledge, clearer perception of their own self-concepts, awareness of more effective communication patterns, and a commitment to nursing practice. As they become more adept with the process of critical thinking, it is hoped that the delivery of their nursing care will continue to improve.

Ideal Nurse Semantic Differential Scale

The project staff developed a set of self-administered semantic differential scales made up of 23 pairs of bipolar adjectives under each of the three concepts: "self as a nurse now," "self as a nurse one and one-fourth years ago," and "ideal nurse." At the end of the project, students rated the semantic differential scales. Statistical analysis showed that

the students viewed themselves as being closer to their concept of ideal nurse than they had been before enrolling in the program. While it is recognized that their responses do not reflect their actual delivery of nursing care, it is believed that their perceptions of themselves may indicate a positive change in their approach to nursing.

Health Care Professional Attitude Inventory

At the beginning and at end of the project, students wrote responses to the Health Care Professional Attitude Inventory. Objective data suggested more positive professional attitudes at the project's end.

The students all reported positive outcomes for their own professional development. One said that her "consciousness had been raised from intuition to a science," reflecting her ability to use concepts and theories to improve care. Another reported an "enrichment of her own practice." One student, reflecting upon her past administrative practice as head of the practical nurse program, had thought it quite good until she was exposed to management theory and then labeled her past style as "el dictator." Another reported former discouragement with nursing generally but greater satisfaction presently.

It was remarkable to the faculty that anger was missing in the students, and some consideration was given to this fact in the evaluation process. Because anger is often present when RNs are taught in the same classes as generic students, it was thought that having their own special group of peers—all RNs alike—reduced the anxiety experienced by other RN students. Other contributing factors derived from peer and employer support, self-determination of learning activities, and greater feelings of self-esteem. At the end of the project, the students felt better as people and closer to their own conception of ideal nurse.

After an initial period of conducting the program exclusively for Medical University Hospital nurses, the program was extended to RNs working in other agencies in the Charleston area. In this way the quality of nursing care in the entire metropolitan area will be strengthened. Further, the clinical preparation of generic students will be greatly enhanced as increasing numbers of well-prepared role models become available.

RN EDUCATION: RURAL OUTREACH

University of Maryland at Baltimore, School of Nursing
Project Director: Helen Kohler

Health care demands in rural areas exert an ever-growing pressure on nurses to prepare themselves for more advanced practice. Nevertheless, the majority of RNs in rural settings are practicing and assuming leadership positions without baccalaureate preparation. Access to additional nursing education poses a most difficult problem for them. Many in the more distant rural areas cannot take advantage of RN programs usually offered in the larger population centers. Health care delivery problems in rural settings can be appreciably offset, and nursing expertise improved, by making baccalaureate education available nearer to where these nurses live and work.

Launching a rural baccalaureate program at the University of Maryland at Baltimore (UMAB) was in response to a loudly voiced and clearly heard need. In 1973, the former dean of the School of Nursing was approached repeatedly, and with growing urgency, by health agency administrators and by RNs in the Cumberland area about the needs in rural western Maryland for a baccalaureate program in nursing. Not many months later the same appeals began coming from the Eastern Shore. The principal argument of nursing service administrators in these areas pointed to the lack of educational opportunities in nursing in parts of the state distant from the university, a lack that had resulted in large numbers of RNs completing the bachelor's degrees in non-nursing fields (mainly sociology, psychology, or education) at local state colleges. Directors of nursing in several hospitals and health agencies protested that this type of education did not contribute to their needs for improving patient care. These same directors gave strong support—even applied pressure—in planning for a nursing program reaching out to the rural areas.

The School of Nursing, therefore, began an effort whose major purpose was to deliver an outreach baccalaureate program to rural sites in Maryland using nontraditional strategies and atypical time-and-place options to accommodate the working part-time student. The effort, funded by the W.K. Kellogg Foundation, had the strong support of the chancellor at

the Baltimore campus, the vice chancellor for Health Affairs, and the dean of the Medical School.

The home School of Nursing is one of six schools on the University of Maryland's "professional campus," located in downtown Baltimore. Education in human service professions on the Baltimore campus goes back to the establishment of the School of Medicine in 1807. In addition to Medicine and Nursing, the professional schools at UMAB are Dentistry (the first dental school in the world), Law, Pharmacy and Social Work and Community Planning. This "family" of schools represents a rich resource to the community and the state, as well as to each other.

The School of Nursing began as the University of Maryland Training School in 1889 in the old University Hospital. Its founder, Louisa Parsons, was a graduate of Florence Nightingale's school at St. Thomas' Hospital, London. In 1920, the School of Nursing became a separate unit of the university, administered by the hospital. A five-year optional curriculum was instituted in 1926, combining two years of arts and sciences on the College Park campus and three years at the School of Nursing in Baltimore, with both a BS degree and a diploma in Nursing awarded at completion. Both this sequence and the hospital school phased out in 1952, and were replaced by an autonomous four-year program leading to the Bachelor of Science in Nursing. The Master of Science with a major in nursing was added in 1954, and a doctoral program in nursing in 1979.

Current enrollments in the School of Nursing number about 700 undergraduates (juniors and seniors in nursing) and 400 graduate students. Undergraduate enrollments normally include about 100 RNs (105 in 1980-81 on the Baltimore campus). Although the university has admitted RNs for many years, it was not until 1973 that a track for RNs was developed, following a gradual buildup in the number enrolled. The school's well-developed program for, and experience with, RN students made it a "natural" for providing an equivalent program off-campus for community-bound nurses in other parts of the state.

CURRICULUM

The University of Maryland's nursing curriculum is an upper-division one that requires a foundation of 59 semester hours of lower-division coursework at an accredited college or university. Students complete the lower-division general education requirements for the baccalaureate degree with the nursing faculty giving approval to course selection (see Figure 17 for details). But credits earned without prior approval are assessed according to established policies governing transfer, which include the following of special concern to RN students:

1. Human anatomy and physiology, chemistry, and microbiology must be taken by students who plan to, or could, use them as credits toward a major in these areas.
2. Required natural science courses (chemistry, microbiology, and human anatomy and physiology) must include laboratory experience.
3. Basic nutrition must be a course with prerequisites of organic chemistry and anatomy.
4. Nursing courses are not transferable. (These are taught in the junior-senior years.)
5. Only a total of 60 applicable credits are transferable.

The upper-division nursing major is shown in Figure 18.

CHALLENGE POLICIES

Opportunity for graduates of associate degree and diploma programs to complete the baccalaureate degree is a result of the faculty belief that these adult learners have special characteristics: diverse life, educational, and clinical experiences; a high level of motivation that fosters independent and collaborative learning; and a need to complete baccalaureate education to prepare them effectively for additional career opportunities.

Since, in general, RNs as adult learners already have preparation and practice in secondary care, curricular modifications for RNs must supply both theory and practice relating to primary care concepts and an elective in their special area of interest.

Figure 17

General Education Requirements

	Credits
English Composition	3
Human Anatomy and Physiology, including laboratory	6-8
Microbiology, including laboratory	3-4
Chemistry, including laboratory	6-8
*Social Sciences	12
**Humanities	15
Nutrition (sophomore level)	3
Electives	6-10
	Minimum of 59

*Must include at least one course in sociology and one course in psychology.

**Must include courses selected from at least three disciplines within the humanities areas.

Figure 18

NURSING MAJOR: RN STUDENTS

Course Requirements, 1980-81

Junior Level	*May Challenge*
	Concepts of Nursing I (9 credit hours)
	Human Growth and Development (3 credit hours)
	Deviations in Human Growth Development (2 credit hours)
	Introduction to Administration of Medications (1 credit hour)
	Concepts of Nursing II (9 credit hours)
	Pathophysiology and Its Pharmacological Implications (4 credit hours)
Senior Level	***Must Take***
	Concepts of Nursing IV A (9 credit hours)
	Introduction to Organizational Behavior (3 credit hours)
	Nursing in Society (3 credit hours)
	Survey of Research and Statistics (3 credit hours)
	Clinical Nursing Elective (3 credit hours)
	Concepts of Nursing IV B (9 credit hours)
	Special Topics: Electives in Health-Related Courses (2-3 credit hours)

Note: A minimum of 120 credits is required for graduation.

Opportunity to establish credit for certain foundational and nursing courses is provided, and RN students may earn 28 junior-year nursing credits by passing the challenge examinations selected by the nursing faculty. Four of the challengeable courses are tested by examinations prepared by the University of Maryland faculty. Three other areas of content are tested by the ACT-PEP (American College Testing's Proficiency Examination Program) tests in maternal and child health nursing, adult nursing, and pyschiatric/mental health nursing.

Students may make two attempts to pass the ACT-PEP tests. If they are unable to pass on the second attempt, they may apply for admission to the generic program. If the applicant fails to pass the teacher-made tests, she must take the courses.

OUTREACH SITES

Each of the three sites for the outreach program presented its own individual characteristics and health delivery needs to the planners of the overall project.

Cumberland is a city of nearly 25,000 people located in the mountains of western Maryland, about 150 miles from Baltimore. Although the area is part of Appalachia and has a fairly large farming population, the town itself has a variety of industries and, therefore, a commuter population. Cumberland is the medical center for a population of over 100,000 people from the surrounding tri-state area. Sacred Heart and Memorial hospitals, each with approximately 250 beds, are located in the city. The modern complex of the Allegany County Health Department is on the edge of town, employing at least 40 RNs on the staff. The 250-bed Thomas B. Finan Mental Health Center has been built nearby, a modern complex with many diverse programs.

Before the Outreach Program, all nursing preparation in the area was provided by an associate degree program at Allegany Community College in Cumberland, graduating approximately 55 nurses a year. Frostburg State College, located 10 miles farther into the western mountains, is the only other institution of higher education in the area. It has served as a feeder school for the generic nursing program on the Baltimore campus of the university. Students complete two years at Frostburg and then transfer into the university nursing program as juniors.

Requests that the University of Maryland provide an off-campus BSN program began in the late 1960s, when the director of nursing service at Sacred Heart Hospital in Cumberland protested that her associate director was planning to pursue a degree in sociology at the local state college because she could not leave her family and go to Baltimore for the required senior year of full-time study. Other nurses, too, recognized their need for additional education, but could not leave children and jobs to drive 150 miles over mountain roads to get it. In the fall of 1974, the director at Memorial Hospital commented how pleased she was that there were now three nurses with baccalaureate degrees on her staff, and she earnestly desired more of them in order to upgrade patient care. Such events created a climate in the

Cumberland area that ensured a warm welcome to the university's Outreach Program.

Salisbury, the Eastern Shore site of the Outreach Program, is far down into the Watermen's fishing territory of the state. The Bay Bridge, near Baltimore, is the only road-link from the Eastern Shore to the "Western Shore." There are a number of medical institutions along the route to Salisbury. Among them are the 462-bed Eastern Shore Hospital Center, a state psychiatric facility in Cambridge; the modern Holly Center, a cottage-system state residence for 200 retarded people located on the edge of Salisbury; the 230-bed Deer's Head Center, a state rehabilitation hospital in Salisbury; and several general hospitals. In most of these institutions, staff nurses with baccalaureate degrees were virtually unknown. In health departments, usually only the nursing director was prepared at the baccalaureate level. The small number of baccalaureate and master's prepared nurses in administrative or teaching positions had, in general, grudgingly crossed and recrossed the Bay Bridge to the University of Maryland (about 130 miles each way) in pursuit of adequate preparation for their jobs. When word of exploratory efforts toward a decentralized degree program in western Maryland reached "The Shore," very clear implicit and explicit messages were conveyed to the School of Nursing: Eastern Shore RNs should have access to further education that is equal to that of the "Western Shore" nurses.

At this time there were two schools of nursing on the Eastern Shore. The 225-bed Memorial Hospital in Easton (a town of less than 10,000 people) operated a three-year diploma program, graduating approximately 25 people each year. The 315-bed Peninsula General Hospital in Salisbury (a city of close to 25,000 people) operated a two-year diploma program from which about 35 nurses graduated each year through 1978. A technical college in the Cambridge area, populated by over 10,000 people, was contemplating an associate degree program using 150-bed Dorchester General Hospital for clinical experience.

The small campus of the University of Maryland-Eastern Shore, located in Princess Anne, then served as a feeder school to the School of Nursing on the Baltimore campus in the same manner described for Frostburg State College. A baccalaureate nursing program was not under consideration because of the very small (40-bed) community hospital in the area and the full use of Salisbury clinical facilities by students already there. Many RNs completed bachelor's degrees at the university in non-nursing fields.

Most of the non-nursing degrees earned by Eastern Shore RNs came from Salisbury State College, a rapidly growing four-year institution. After the University of Maryland had begun the early phases of its Outreach Baccalaureate Program on the Eastern Shore, the college was urged to establish a collegiate program in nursing to replace the diploma program at Peninsula General Hospital. The director of the Outreach Program served as a consultant to the college president and related staff in the planning stages, and the new Salisbury program proposed to include RN students as soon as feasible. In the interest of orderly statewide and regional planning, it seemed imperative that the university, as the older established nursing program, step aside rather than appear to compete with a new program's sound development. After the Salisbury State College program became a reality, the UM Outreach Program moved into master's education in the Eastern Shore area and shifted its second baccalaureate site to Hagerstown, where nurses had organized a pressure group to appeal for such a program.

Hagerstown, the third site for the undergraduate Outreach Program, is a city of 33,000 people and is located 70 miles west of Baltimore. The population of surrounding Washington County is 112,000, with 75 percent of the people living in and around Hagerstown. The major industries of the area are transportation and agriculture, with some small manufacturing businesses also present.

There are two hospitals in Hagerstown. Washington County Hospital is a 400-bed general hospital. Western Maryland Center, a state rehabilitation institution, is licensed for 175 beds. It also has provisions for 50 dialysis patients and 30 chronically ill or handicapped day-care patients. The Washington County Health Department is located in Hagerstown and it has, as part of its staff, 26 full-time and eight part-time RNs.

Seventy miles west of Hagerstown and over many mountain tops is Cumberland, one of the original Outreach sites. Twenty miles to the east of Hagerstown is Frederick, a town of about 25,000 within a county of 110,000. There is one large mountain between Hagerstown and Frederick, and the winter weather problems caused by this hill tend to promote unwillingness of Hagerstown nurses to travel to Baltimore for further study. The Frederick area nurses do tend to go to the Baltimore campus, since the trip takes only an hour and the roads are good.

Most of the basic nursing preparation in the area is provided by Hagerstown Junior College, which graduates 25 to 30 RNs a year. Frederick Community College produces approximately 20 nurses a year. Nearby Shepherd College in West Virginia has a two-year nursing program from which 30 to 40 nurses graduate each year. Shepherd is also the location for a small degree-completion program for RNs begun in 1980 by West Virginia University almost exclusively for its own state residents. A number of the West Virginia RNs, along with nurses from Pennsylvania,

work and pursue further education in the Hagerstown area because of the proximity to western Washington County.

THE OUTREACH PROGRAM

Most students at the Outreach sites had jobs and families. The program was consequently geared to part-time study and extended over a three-year period. Delivery methods and teaching strategies were modified to adapt to the clinical resources of the rural areas and to meet the needs of experienced nurses who were adult learners. Flexible teaching procedures were planned for the clinical courses, so that students could increase not only their competency but also their self-esteem through a relevant self-directed learning program.

Assessment of each student's readiness to begin, academic advisement through the program, and monitoring of a student's progress played a large role in developing optimal student-faculty rapport and ultimately in the success of the program.

In initiating the first course offering, the nursing faculty gave primary consideration to student interests and needs. It was crucial that the course stimulate and reinforce desire for further study. Students were asked to make a selection from the list of five electives offered on the home campus. Because of budgetary constraints only one could be offered, and "Human Values and Ethics in Health Care" was selected by the majority. The course outcomes were positively evaluated by the following criteria: (1) meeting the personal needs of the learner; (2) relating to and having an impact on present working situations; (3) reinforcing continued study.

Two other nonclinical courses were taught the following spring and fall semesters. An "Introduction to Organizational Behavior" focused on leadership, group dynamics, and organizational systems. Modifications were made to direct the course toward health care delivery in rural areas because most of the students planned to remain there. Theory taught in the course "Introduction to Research and Statistics" was applied to clinical experiences that students would have as part of the nursing concepts course. Tools were developed to determine the learners' base of knowledge and use of research principles. After completion of the course, students were followed over a period of time to determine if they increased their use of research principles as part of their professional nursing role. They did.

In designing appropriate experiences for the first clinical course (spring of 1977), the university worked out agreements with the local agencies to permit the students to continue as full-time employees. Some of the agencies were able to allow released time (on an individual basis) to undertake assignments to meet course objectives. Assignments included extensive primary care to people seeking medical services; planning and providing continuity of care; making home visits for evaluation and follow-up care; working with families and community groups; using community resources in providing care. Students employed in agencies unable to provide released time completed their laboratory exercises on their own time. In such cases the employing agencies were quite willing for students to use their clinical facilities. Unfortunately, the clinical agencies were unable to continue released-time practices after the first clinical course.

As adult learners, the students played an important part in monitoring their own progress in achieving course objectives. Faculty worked closely with the students to design individualized clinical learning experiences.

To reinforce further the independent and relevant nature of the program, students selected for study in depth an area that had particular meaning to them in order to obtain credit for a clinical nursing elective. This allowed the student to acquire a strong theory base through extensive literature review, in addition to gaining greater clinical skills beyond those already mastered. The evaluation procedure included self-appraisal by having students establish their own objectives and determine their attainment of them. A physical assessment course was a major offering of this type.

Students also came to the home school for workshops and mini-mesters. This was considered an important activity because of the support systems provided by the home school and the opportunity it provided for interaction with the larger peer group. Such systems reinforce desired behaviors among students learning a new role.

STUDENTS AND FACULTY

Students also came to the home school for workshops and "mini-mesters." This was considered an important activity because of the support systems provided by the home school and the opportunity it provided for interaction with the larger peer group. Such systems reinforce desired behaviors among students learning a new role.

For most of them, degree completion on the Baltimore campus would have involved a three-hour drive one way for classes, if not a move to the city. This was next to impossible for the large proportion who had small children and could not give up their jobs.

The average student in the pilot class was an experienced RN who had worked five to ten years as a nurse. Of the pilot class, 63 percent held jobs above staff level, 54 percent worked in general hospitals, 70 percent were diploma graduates, 66 percent had less than 10 years' nursing experience, 66 percent were under 35 years of age, 77 percent were married, and

66 percent had one or more children. Later the classes varied from this profile but were still within bounds of the usual definition of the adult learner. Succeeding classes had more staff nurses and more associate degree graduates.

The Outreach faculty consisted of able teachers who lived in the Outreach community. They were educationally well prepared and some had recently taught in the current program on the main campus. They came to Baltimore for a week of intensive orientation and then became members of the RN faculty, coming to campus regularly for meetings of that group.

The faculty employed at the Outreach site were persons who could handle a flexible program of study and who wanted to teach RNs. When the first clinical course was in progress, the School of Nursing exported to Outreach sites a number of its best teachers to present certain aspects of the content. This served at least two purposes: (1) it acquainted the Outreach students with a number of role models who were prepared as clinical specialists (and teachers), and (2) it provided demonstration of various teaching methodologies and diverse content to the Outreach faculty. It also increased the Baltimore faculty's appreciation of the educational and professional needs of nurses in rural areas of Maryland.

Special lecturers were employed at the Outreach site to teach nonclinical courses. They used the course outline and syllabus developed by the School of Nursing, thus ensuring equivalence to the course offered on the Baltimore campus.

COMMITTEE STRUCTURE

The demonstration Outreach project gained great benefits from two types of continuing committees. One, the Outreach Nursing Program Advisory Council, was tremendously helpful in creating and sustaining good program-community relations and in enabling the project to work with local needs. Included on it were community people involved with or important to the project, student representatives from each site, adult education specialists, and School of Nursing personnel closely involved in the RN course of study.

The second body, the Liaison Committee, consisted of educators from several nursing outreach programs across the nation. Its purpose was a mutually beneficial sharing of experiences, plans, and concerns about satellite programs. The Liaison Committee met once or twice a year, with a variable number of persons participating from institutions as far away as Oregon. Funding for the meetings was made possible by the W.K. Kellogg Foundation. The Liaison Committee members extended their function to provide group consultation to new off-campus programs and then to develop a set of guidelines for planning and implementing outreach nursing programs.

CONCLUSION

A major purpose of this demonstration project was to determine the change in the individual student that occurred over time as a result of the educational experiences gained from an integrated nursing curriculum offered in an outreach format. Faculty assumed that RNs "know about" and can practice technical nursing. They further assumed that studying nursing by using a conceptual framework for practice improves the nursing care of clients. They believed that knowledge of research and organizational behavior changes the way nurses approach problem solving and work within the health care system. Therefore, the evaluation plan measured whether nurses who learn to work from a conceptual framework during a degree-completion course of study do, in fact, provide a higher quality of service.

Change was studied in terms of appraisals from the students themselves, their supervisors, and the recipients of their nursing interventions. Determinations of differences in functioning were made at the end of each course as well as at six months and then 18 months following degree completion. In general, those evaluations have been positive, in fact, even glowing in their tone.

In sum, the basic premise was that nurses who increase their skills and self-esteem through a relevant, self-directed baccalaureate nursing program will make a positive impact on health care delivery in rural Maryland. The positive impact was reflected in graduates' management of health care tasks and in their rendering of direct care.

Both the RNs themselves and their supervisors say that:

—The graduates are clearly functioning at a higher level in responsible positions they already held, or in positions to which they were promoted.

—The graduates demonstrate understanding of primary care by serving as role models in planning for continuity of health care.

—The graduates excel as role models in the use of a theoretical basis for nursing practice.

From several years of "reaching out" to provide bachelor's degree nursing education for rural RNs, the University of Maryland School of Nursing has come to certain conclusions to share with other institutions contemplating outreach programs:

1. *Ten to 15 percent of "interested" nurses actually enroll in the outreach program.* Of several hundred nurses contacted in the rural Maryland communities, a total of 51 have

graduated and 30 more are expected to enroll in the fall of 1981. This shrinkage from apparent numbers to real numbers seems to be a common experience with many outreach programs. Most members of this project's Liaison Committee, consisting of representatives of about 12 such programs across the nation, agreed that their interest-to-enrollment ratio was about 10 percent.

2. *Host community support is crucial and very gratifying.* In the Maryland project, the positive attitude of the communities facilitated enormously such necessary arrangements as providing non-nursing courses, obtaining classroom and office space, and locating nursing and non-nursing faculty. Without community cooperation an outreach program could be faced with insuperable obstacles.

3. *Relationships with local agencies need to be carefully nurtured.* This is absolutely essential if flexibility in scheduling and individualization of clinical experiences are to be possible. The use of such devices as released time for working students, special clinical assignments to meet learner needs, and the use of clinical facilities depend on the willing cooperation of local health agencies. In the Maryland project, a good relationship between the outreach program and the local health agencies made it possible for some of the students to develop services of direct benefit to the community. For example, one group developed the first screening program in a rural school; another group focused on health counseling services at a pool hall.

4. *A tremendous amount of time goes into student advisement and between-campus liaison work.* Despite the "student profile," it seems that in an outreach program no two students are really alike in educational experience, work experience, family situation, or individual career aspirations. A great deal of academic, professional, and even personal counseling is required to assess student needs and recommend the best educational alternatives. It also takes considerable time and thought to keep the outreach program visibly and educationally tied firmly to the program on the main campus. In view of these outreach program demands, it is risky to undertake the venture unless the budget will allow for personnel to attend to these functions.

5. *A brief period of interaction with peers on the main campus is necessary to have students identify with the school from which they graduate.* The Maryland project found that the first graduates of its outreach program felt isolated, as though they did not really "belong" to the university. When subsequent classes were required to come to the main campus for an intensive week of coursework during their study toward the degree, the feeling of isolation was largely obviated.

6. *Cross-fertilization of outreach and main campus faculty is valuable.* Like the students, the outreach faculty needs a sense of belonging, and finding ways to keep them in touch with main campus faculty helps to achieve that. It also helps to keep program objectives and content congruent in the two places. Intercampus contact has the additional benefit of keeping the main campus faculty closer to the realities of rural health care.

7. *The local health care climate really does change with addition of a cadre of nurses who use a conceptual basis for nursing practice.* The reality of change was clearly reflected in the evaluation of the project and has been reconfirmed since then in informal conversations with nursing administrators in the communities and with the graduates themselves.

The School of Nursing anticipates the continuation of the satellite sites. With regard to the Eastern Shore, Salisbury State College has developed a BSN program that is functioning well. However, the university intends to continue programming in Cumberland and Hagerstown.

RN EDUCATION: URBAN OUTREACH PROGRAM

The University of South Florida, College of Nursing, Tampa
Project Director: Minerva Applegate

The University of South Florida's (USF) College of Nursing, in 1976, wanted to improve the quality and expedite implementation of learning opportunities for associate degree and hospital school graduates (RNs) by providing self-instructional and evaluation tools for student use. Faculty believed these instruments would assure quality in off-campus programs by setting minimum competency and content requirements, by assisting them to evaluate students' entering and exiting skills, and by permitting them to carefully monitor the RNs' progress through the curriculum.

The need for additional baccalaureate opportunities for RNs in Florida was indicated by the reports of two independent studies: *Health Manpower Planning Resources Development* (June 1976) completed at the University of Florida, and the *Nursing Program Review of the State University System of Florida* (June 1977). It was found that of more than 28,000 active RNs in Florida, almost 23,000 had less than a baccalaureate degree as the highest earned credential. Approximately 7,500 of these were living and practicing in the 15 counties comprising the University of South Florida's regional responsibility. Assuming that the national norm of 10 percent of associate degree and diploma graduates seeking baccalaureate degrees pertained to Florida, it was estimated that a pool of about 2,500 nurses should have been looking for further educational opportunities throughout the state and at least 750 in the University of South Florida region. Added to the pool were graduates of associate degree programs in the region, amounting to an excess of 350 students per year.

The majority of these nurses were place-bound by family and job responsibilities, and to meet their needs, an alternative to full-time pursuit of a degree on a university campus was required. The existence of regional campus resources and the university's tradition of taking educational opportunities to the learner provided a solution to this problem. In fact, the College of Nursing had been offering courses for RNs both during the day and in the evening in Sarasota, Fort Myers, and St. Petersburg.

The tradition of extending learning opportunities to students in off-campus sites began about a decade after the University of South Florida was established in 1956 (in Tampa) as the first urban regional university in the Florida State University System. The university serves a 15-county region on the west coast with a total population of more than two million people, about one quarter of the state's population. Three regional campuses, in addition to the main campus in Tampa, are currently operating:

—The St. Petersburg campus, opened in 1965, serves 620,000 people living in Pinellas County.

—The Fort Myers campus, opened in 1974, serves the lower west coast population of about 250,000.

—The Sarasota campus, opened in 1975, succeeded a continuing education center that had operated for a number of years, and serves a population in excess of 300,000.

The College of Nursing, one of 10 colleges in the University, was authorized by the Florida legislature in 1965 as part of a new medical center complex at the University of South Florida. The first generic students were accepted at the freshman level in 1971 and admitted to the upper-division major in September 1973. In response to community pressures, courses for RN students were initiated in Tampa and on the regional campuses in the fall of 1974.

Faculty desire to offer a baccalaureate nursing program on the regional campuses coincided with mutual interest and purpose at the W. K. Kellogg Foundation. Consequently, a demonstration project was initiated at the College of Nursing to: (1) evolve instructional materials to promote student self-instruction and consistency in teaching courses, (2) develop evaluation processes and tools to assess competencies of entering students and performance throughout the program, and (3) provide faculty development opportunities through workshops and consultative assistance.

CURRICULUM DEVELOPMENT

The identification of comparable learning experiences for RN students on the regional campuses and generic students on the main campus led in time to the formulation of a new curriculum for both. As modules and comparable learning experiences were developed for RN students, basic flaws in the older generic curriculum appeared, necessitating a complete revision of the offerings of the College of Nursing. Faculty were forced to rethink their philosophy for educating nurses and, consequently, the concepts supporting the framework of the curriculum were revised.

Changing beliefs about how an educational program is to be delivered is often an exciting prospect welcomed by faculty who have become satiated with current practices. The difficulty lies in finding time for the arduous and difficult tasks involved in changing teaching material and strategies to conform with the new philosophy.

One approach to the task was the offering of a workshop on baccalaureate education for RNs, attended by USF faculty directly involved with making changes in the curriculum and faculty from seven other existing baccalaureate programs and two emerging programs in public and private universities in Florida. The workshop focused on trends and issues in baccalaureate education for RNs, learning outcomes, strategies for teaching adult learners, and comparison of competencies of associate degree and baccalaureate graduates.

Following the workshop, terminal competencies and those expected at the end of each semester were revised and checked for validity by reviewing pertinent literature and accreditation standards, and by identifying the expectations of the beginning staff nurse at local health care agencies. During this process a guide to rating competencies was developed to ensure the continuity of curriculum offerings with respect to cognitive, affective, and psychomotor learning, in addition to professional responsibility.

An analysis of the content of the current curriculum was made by the project staff. The validity of the content was ascertained by evaluating the curriculum in the light of current standards and practices in baccalaureate education, and by contrasting that information base with faculty views of their own curricular offerings. Curricular mapping revealed areas needing improvement or correction. A dictionary of terms used in the curriculum was compiled. After careful evaluation, for example, the faculty purchased the physical assessment modules developed by Dorothy del Bueno, a consultant to the faculty in their work.

Next, exisiting learning materials were collected for faculty review. Particular attention was given to independent learning resources available both from publishers and from schools and programs in nursing. A tool for evaluating modular learning materials was developed and used to good effect. Numerous modules—including modularized texts—were evaluated by faculty. As a result, the school now has a comprehensive resource file of modular materials, audiovisual materials, and other pertinent learning resources. At the same time, faculty also began a bank of objectives and a bank of valid and reliable test items for use in developing teaching materials.

Another workshop on competency-based education and the development of self-learning packages was held for faculty in January of 1980. It was also attended by faculty working in other nursing education programs in Florida. In fact, faculty spent considerable time learning about competency-based education and so were able to develop modules of their own with ease and satisfaction.

Concern with testing behavioral outcomes led to the third workshop on clinical performance examinations in April 1980, again open to nursing faculty in other Florida institutions. As a direct result of this workshop, faculty developed a comprehensive examination to be used for testing the psychomotor skills of both generic and RN students.

Work began on the development of new teaching materials as existing modules were evaluated and upgraded by faculty and new ones were written. After the modules were completed, they were tested a few times. Students evaluated them on the basis of qualities determined through a review of the literature on modules and module development, faculty concerns, and recommendations from the Curriculum Committee. Some modules were deemed inappropriate. Guidelines that the faculty could use in constructing future modules gradually emerged.

During the development of the new curriculum, faculty made a concerted effort to develop instructional materials for use both in courses taught on the main campus and at an outreach site. For example, the client assessment course was completely modularized with carefully delineated objectives, content, and learning experiences that used a variety of media, clinical practice experiences, forms of faculty supervision, and evaluation tools. The aim was not only to assist students in self-learning but also to assure comparability from one teaching site to another. Modules were prepared for the entire curriculum and were designed to allow RN students to self-pace their study or to prepare for challenge examinations.

STUDENTS

In compliance with the articulation agreement between the State University System and the community colleges, the college accepts transfers from the community colleges, as well as students from the lower division of other colleges at USF, and from other accredited senior colleges and universities. About 65 percent of the RN students have an associate degree in nursing; the remainder are graduates of hospital schools. Because the college cannot accept all the qualified Florida residents who apply, it cannot admit applicants who are not state residents. About 6 percent of the students are members of minority groups, and approximately 3 percent have earned degrees in another discipline.

To meet its enrollment quota, the college selects students on the basis of specific requirements: the fulfillment of prerequisites, academic achievement,

the results of an interview, the demonstration of writing skills, and a record of community service. About one out of every four qualified generic students is accepted for admission. The percentage of RN applicants for admission is much higher, and the number of aspirants who have completed the prerequisites is increasing so rapidly that some qualified applicants have to wait for admission. Since many of the enrolled RN students on the Tampa campus commute from a distance, it was hoped that those who could not be accepted in Tampa would enroll in the outreach program courses. In fact, several RN students enrolled at more than one campus before completing their degree. About 90 percent of the RN students are employed in nursing while working toward a degree; many are working full time.

CHALLENGE POLICIES

The University of South Florida's nursing curriculum is an upper-division one that requires a foundation of 60 semester hours of lower-division coursework (see Figures 19 and 20 for details). Associate degree graduates are able to transfer credit to the university to meet this requirement, and diploma (hospital) graduates may challenge the general education courses by College Level Examination Program (CLEP) examinations. In addition, university tests are available in nutrition and designated courses in psychology and sociology. Credit in anatomy and physiology may be earned by successfully passing the American College Testing's Proficiency Examination Program (ACT-PEP) examinations.

Figure 19

General Education Requirements
66 Semester Hours*

Before admission to the upper-division major in nursing, the student must complete at least 60 semester hours of general education and meet the following requirements** with a minimum grade point average of 2.5:

- English composition—at least 6 semester hours
- Humanities/fine arts—at least 6 semester hours
- Mathematics/quantitative methods—at least 6 semester hours including college algebra (at least 3 semester hours) and statistics (at least 3 semester hours)
- Natural science—at least 6 semester hours in both biology and chemistry; at least one course in microbiology, anatomy, physiology, and nutrition
- Social and behavioral sciences—at least one course in modern American history or political science, general psychology, sociology, human growth and development

*Six semester hours in the upper division
**Many of these requirements may be met through successful performance on CLEP, ACT-PEP, or college challenge examinations.

Figure 20

Nursing Major Requirements **60 Semester Hours**

JUNIOR YEAR

In addition to requirements outlined below, all students must take at least 4 credits of nursing electives and/or independent study.

Semester I	Semester Hours
Nursing Core I	3
Nursing Process I	3
Nursing Intervention I	2
Client Assessment I	2
Semester II	
Nursing Core II	2
Nursing Process II	2
Nursing Intervention II	3
Nursing Process III	2
Nursing Intervention III	2
Client Assessment II	2
Semester III	
Nursing Core III	2
Nursing Process IV	3
Nursing Intervention IV	4

SENIOR YEAR

Semester I	
Nursing Core IV	2
Nursing Process V	2
Nursing Intervention V	2
Nursing Process VI	2
Nursing Intervention VI	2
Nursing Process VII	2
Nursing Intervention VII	2
Semester II	
Nursing Core V	3
Preceptorship	6

Note: RN students must meet the same terminal competencies for the program as generic students, but for those who take advantage of advanced placement opportunities, the major in nursing is composed of at least 32 semester hours of required nursing courses and at least 4 credits of nursing electives.

The typical curriculum for RN students at the university is organized in five sets or series of courses (see Figure 21 for details). A nursing skills examination is a required part of the first semester course, but clinical challenge of other courses is possible by taking the performance examination for each course. Students may successfully challenge all but the last semester in this manner. A successful completion of the summative evaluation requirements for each course earns the credit allotted to it. In addition, 20 semester hours of elective nursing credit can be earned by passing the baccalaureate examinations offered by ACT-PEP.

Figure 21

Typical Curriculum Plan for RNs

Semester I	Semester Hours
Nursing Core I	3
Client Assessment I	2
Nursing Process in Primary Care	3
Nursing Practicum I	3
Semester II	
Intermediate Nursing Core	4
Nursing Process in Complex Situations	4
Nursing Practicum II	4
Semester III	
Nursing Core V	3
Preceptorship	6

The curriculum is organized in five sets of courses:

1. Nursing Core — a series of courses that focus on the framework and progressively develop the conceptual of professional role and responsibilities and the theories and issues that underline role development, e.g., communication, systems, stress, leadership, scientific method, learning, change.
2. Client Assessment - provides a base in bio-psychosocial assessment of individual health status, including interviewing and health history-taking, essential to nursing intervention.
3. Nursing Process — a series focusing on the use of the nursing process and on principles, content, and learning experiences relevant to professional nursing practice with individuals and families over the life span, including primary, secondary, and tertiary care. These courses are based on a variety of introductory courses and integrate relevant content in client assessment, physiology, pathophysiology, pharmacology, nutrition, mental and community health.
4. Nursing Intervention — a series of courses directly linked to the nursing process courses to provide clinical nursing practice experiences in primary, secondary, and tertiary care with all age groups in a variety of settings. Clinical competency examinations are required for successful completion of these courses. The last course—the preceptorship—is focused on providing intensive clinical experience under the supervision of a preceptor from the selected nursing service setting.
5. Electives — in-depth experiences in Selected Topics in Nursing courses or Independent Study in Nursing.

Courses for RNs follow this design and incorporate the same competencies and objectives as those for generic students, but approaches to meeting the objectives may differ.

CONCLUSION

The College of Nursing at the University of South Florida has made considerable progress in changing curricular directions, becoming a competency-based course. The curriculum remains a concept-oriented, integrated model that includes preparation for different settings for nursing practice, but the conceptual framework and objectives are now the same for RN and generic students. Some basic content in secondary care has been adapted for RN students to build on previous learning and experience, and other concepts and content have been organized in a manner that offers the mature student an opportunity to move more rapidly toward meeting program and course objectives. Nevertheless, objectives, competencies, and evaluation strategies are now the same for both types of learners. In fact, students may elect learning and testing by modular instruction almost solely.

The first semester of the new curriculum is virtually the same for both sets of students and the last semester is exactly the same, but in between, students may proceed at their own rate, completing modules and being tested for competency achievement when they are ready. (The last semester involves a core course and a preceptor experience.) RN students make their own arrangements for meeting the objectives and competencies of clinical practicums; they demonstrate achievement through successful performance on the clinical examinations.

Not only did the faculty undertake curricular revision, it reviewed the autotutorial laboratory materials and the processes for student learning. In fact, the laboratory has been redeveloped into an autotutorial and testing center, where students may use resources for learning and then be tested on motor skills and the successful completion of other competency-based tasks.

As of August 1981, there have been 701 graduates from the program; 324 of these were RN students. Many RN students have since enrolled in master's programs. Almost all of the RN graduates have remained in the geographical area from which they entered the program. A formal follow-up study has not yet been completed, but feedback from employers on an informal survey indicated that graduates of the program, especially RN graduates, are having an impact on nursing services. For example, they are defining objectives of practice in their units, developing quality assurance processes, contributing to staff development and patient education, and devising new approaches to the delivery of care. Moreover, contacts with cooperating agencies indicate that some RN students are making an impact in these areas during their clinical practicum as students.

The success of the RN program, with the graduation of a large number of RN students from the College of Nursing, can be interpreted in several ways. From the students' point of view, the college is now offering RNs an opportunity for baccalaureate education that had been missing in the past. Good students are choosing to matriculate to an excellent nursing program. Travel to and from the main or regional campuses is not difficult. An articulation plan with community colleges means some courses can be taken even closer to home. From the faculty's point of view, the new curriculum represents a commitment to the interests of part-time working adults. Faculty support of these students has been paramount to their success. Finally, the university finds fulfillment of its tradition of service to the community by encouraging both RN students and their mentors to strive for excellence.